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Diphtheria Antitoxin Mulford

For the Treatment and Prevention of Diphtheria

Diphtheria Antitoxin has reduced the mortality of diphtheria from 40 per cent to less than 10 per cent.*

This mortality may be still further reduced

By using Diphtheria Antitoxin earlier.
By giving larger doses—5000 to 10,000 units.
By intravenous injections in severe or late-treated cases.

The Time of Administering Antitoxin is Vital.—In the Philadelphia Hospital for Contagious Diseases, from 1904 to 1910, 256 diphtheria patients were treated on the **first day of the disease and all recovered.**

Patients treated on the **second day** the **mortality** was **5.1 per cent.**

In those treated on and after the **third day** the mortality was much higher.

The early administration of Antitoxin is imperative.

Larger Doses are Necessary.—The object in administering Diphtheria Antitoxin is to neutralize, in the shortest possible time, the poison (toxin) circulating in the blood stream and tissue fluids. Dr. William H. Park advises 10,000 units in severe cases for little children, and 20,000 units in severe cases for adults. This is practiced in many leading hospitals.

Intravenous Injection.—No case should be considered hopeless. In malignant cases and late stages of diphtheria recovery may be brought about by the intravenous use of Antitoxin in large doses. The Antitoxin is thus carried directly into the circulation and its activity exerted at once, whereas, if given subcutaneously, only one-tenth of the amount reaches the blood stream at the end of 24 hours.

The importance of large doses is appreciated when we consider the impossibility of ascertaining the amount of toxin circulating in the patient's blood. The only safe rule is to give **sufficient antitoxin.** The giving of larger doses than are necessary does no harm; but an insufficient first dose, and in some cases the lack of intravenous injection, may be serious mistakes.

Diphtheria Antitoxin Mulford is accurately standardized and repeatedly tested. It is supplied in the Mulford aseptic antitoxin syringes, ready for immediate use, containing 1000, 3000, 5000 and 10,000 units. 20,000 units supplied on special request.

*Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.-. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII *September, 1916* No. 3

PROPOSED NUMERICAL SYSTEM OF HOSPITAL RECORDS

Value of Records and Their Function—Essential Features of a Record System—Nomenclature—Faults of Various Existing Systems—The Numerical System, With Details of Performance—Illustration of the Work in the Departments

By ALBERT H. MILLER, M. D., Providence, R. I.

THE record system of a hospital has two principal functions: first, it provides a working record of each case while in the hospital, and the records should furnish for this purpose the necessary data, with the minimum repetition and copying; second, it provides the means for scientific reference to the work of the institution, and science being systemized knowledge, the record system of a hospital is the foundation on which all scientific work in the institution must rest.

It should be possible to find from the records—the history of any patient whose name is known, with the record of operations, x-ray examinations, and pathological reports connected with the history; a series of cases of any disease treated in any period of time or on any service, the method of treatment, and the results obtained; a series of operations, x-ray examinations, or pathological reports on any condition during any period or on any service; the complications attending any condition during any period; the number of patients in the hospital on any day, the number treated in any department during any period, the average stay in the institution, and such other data as are considered valuable in making up an annual report.

ESSENTIAL FEATURES OF A RECORD SYSTEM

Although there are many diverse opinions concerning the methods of making and filing records, a brief consideration of the matter will show many points on which all authorities must agree. The first essential for a record system is an accurate individual record, and the visiting staff of the hospital must be sufficiently interested to see that the records are properly made. Histories, records of operations, and pathological and x-ray reports must not be postponed, but made on the spot in such a way that they may be included in the record system. Records of operations are best dictated by the surgeon himself at the time of or soon after the operation. The original record should be entered on the standard record sheets and become a part of the record system. Copying of data must be avoided as far as possible.

NOMENCLATURE

A uniform system of nomenclature of diseases must be adopted. It is clearly a waste of time to write of a series of cases of Grave's disease when many cases entered as Basedow's disease, Perry's disease, or exophthalmic goiter are not included. It may be difficult to collect a series of cases of cancer of the uterus when many of the cases are recorded as uterine cancer. The "International Classification of Diseases" has been adopted by all English-speaking countries and by Belgium, France, Holland, and Japan. As elaborated in the Bellevue Hospital nomenclature, it answers most requirements of the present time. It remains for the classification of diseases to be separated into sections corresponding to the services of the hospital, and there will then be a list of diseases corresponding to each service of the hospital. The question of diagnosis is of too great importance to be settled by the house doctor alone. The diagnosis, agreeing with nomenclature selected, must be entered on the history and the visiting physi-

cian's or surgeon's name signed before the patient is discharged.

ALPHABETICAL AND NUMERICAL INDICES

The record system must include an index of patients by name arranged alphabetically, an index of diseases arranged alphabetically under the headings of the nomenclature, an admission book, and a discharge book. Whenever the attempt has been made to omit the admission or discharge book, some less efficient substitute has been used.

FILING OF RECORDS

Alphabetical files should be kept on cards and numerical files in bound books. Numerical filing on cards is more expensive, more bulky, less accurate, and less convenient than filing in books. An alphabetical file in a bound book diminishes in value as it increases in size. In a hospital where the index of names is kept in a bound book, it may be necessary to look through a thousand names beginning with the letter B in order to find John Brown's record.

The histories may be filed in the record room in four ways. First, alphabetically by name of patient; this method of filing has no advantages. Second, alphabetically by name of disease; the change in the system of nomenclature, which is sooner or later inevitable, will introduce complications due to this method of filing histories. Third, numerically by admission number; this is an unnatural method, and necessitates keeping a series of histories on hand until all the patients in the series have been discharged before the histories can be permanently filed; it introduces complications due to the fact that the diagnosis on discharge and not that on admission is the final diagnosis which must appear in the records. Fourth, numerically by discharge number; this is the natural method of filing histories; it lends itself naturally to the introduction of an end result system and to the work of an efficiency committee; the introduction of a key to the admission numbers brings to this method all the advantages of filing histories by admission number.

TRANSFER OF PATIENTS AND HISTORIES

If a case of appendicitis, for example, is found to have been entered on the medical service, the patient will be transferred to the surgical service; the history also will be transferred and will not appear among the records of medical cases. In case a patient is cured of a medical disease and wishes treatment for a surgical condition, he will be discharged and reentered on the surgical service. In this way a case of a certain disease appears only once in the records, but a patient who suffers from two distinct diseases will appear twice in the records.

STANDARDIZATION

All records should be made on a standard size of paper. Economy and convenience in obtaining filing devices immediately settle this point. The quarter sheet, about 6½ by 11 inches, is the size frequently chosen. The adoption of a standard record system for use in all hospitals would be of great economic advantage. It is doubtless true that the ideal system for use in a large hospital would also furnish the foundation for the best system for the small hospital.

PRESENT HOSPITAL RECORD SYSTEMS

In many hospitals the record systems are antiquated, inefficient, and inaccurate. Frequently the really valuable part of the records is kept on slips of paper, which are not preserved as part of the system and are soon destroyed. It is impossible at present to obtain statistics of treatment and results, of post-operative complications, and of anesthetic mortality. We cannot learn the comparative merits of the present treatment of typhoid fever, the value of the Fowler position, or the actual status of the adenoid operation. The statistics obtained from hospital records are so inaccurate that some institutions are considering the advisability of omitting the medical and surgical data from the annual report.

END RESULT SYSTEMS

The fact has recently been recognized that a follow-up system is an essential part of the record system of a hospital. The Committee on Standardization of Hospitals of the Clinical Congress of Surgeons in 1914 reported the following end result system:

Each case which goes to the operating room has a surgeon's card, which is given to the surgeon to fill out as soon as he is through operating. After the operation the card goes with the temperature chart to the patient's bedside, and at his discharge the complication item is filled out and O. K.'d by the surgeon. The card is then given to the librarian, by whom the data on it are neatly transferred to a permanent end result card, which is filed alphabetically. Cases which are not operated on have similar cards made out by their medical attendants. Each morning a clerk writes a routine letter to every patient who was discharged exactly a year before, asking him to report to the accident room or to reply by letter. Notes of their replies are made on the backs of the end result cards. To compile an annual report, it would be merely necessary to have the data on these cards edited and printed in book form.

The foregoing system has fifteen enumerated advantages, and has been adopted by and is in op-

eration in a number of institutions. The system may be criticised as follows: It presumes that the surgeon is incapable of neatly filling out the end result card, and substitutes a copy for his original record. It fails to follow up the treatment of patients who are discharged to the outpatient dispensary. It provides the least efficient and most expensive way for determining what patients were discharged exactly a year before, the cards being filed alphabetically and not in the order of discharge. Notes of replies from patients are copied on the backs of the end result cards and not into the histories, where they would be of greater value in connection with the other data of the case. This end result system is typical of the attempts which are made to collect information of some branch of a hospital which has no efficient record system.

THE NUMERICAL SYSTEM OF HOSPITAL RECORDS

The record system here presented is the result of a study of the systems in use in a large number of institutions. The object has been to adopt the best features of each system, to avoid objectionable features, and to combine the result with the necessary original features to form an efficient system of records. As all data are entered in two different numerical files, the accuracy of any part of the system may at any time be determined.

For a hospital of average size the system requires the following forms:

1. ADMISSION BOOK.—Consecutive admission number, date, time (a. m., p. m.), name, residence, birthplace, name of parents, age, M, F. M. S. W. B. W., occupation, religion, previous hospital treatment, admission diagnosis, duration of disease, recommended by (Dr., ambulance, O. P. D. No.), name of (relative, friend), address of same, nearest telephone No., service, ward, private room, private patient (Dr.), transfer (service, ward, date).

2. DISCHARGE BOOK.—Consecutive discharge number, name, date, time (a. m., p. m.), admission date, days in house, diagnosis, complications, condition, reentry, recommended to O. P. D., end result letter sent, reply, second letter.

3. FIRST PAGE OF HISTORY.—Admission number, date, time (a. m., p. m.), name, residence, birthplace, age, M. F. M. S. W. B. W., occupation, admission diagnosis, duration of disease, recommended by (Dr., ambulance, O. P. D. No.), service, ward, transfer (ward, service, date), private room, private patient (Dr.), surgeon, physician, house doctor, discharge number, discharge date, days in house, recommended to, diagnosis, complications.

4. BLANK HISTORY CHARTS.

5. DISCHARGE OR TRANSFER SLIP.—Admission number, name, discharge from (ward, service), transfer from (ward, service), transfer to (ward, service), date, bookkeeper, superintendent.

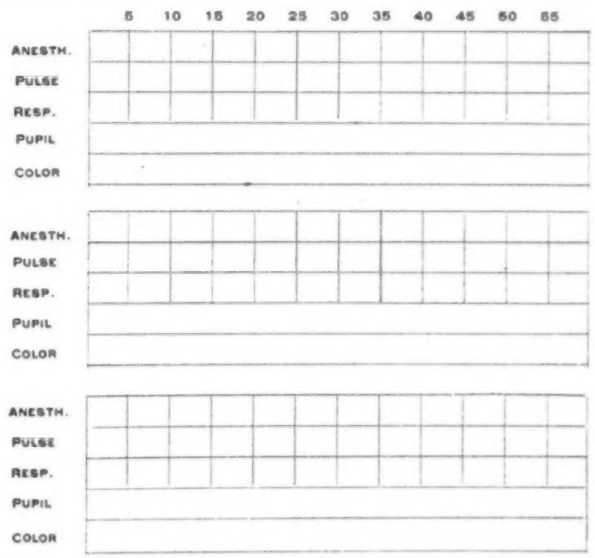
6. OPERATION BOOK.—Consecutive operation number for hospital year, date, admission No., name, operation, surgeon, anesthetic.

7. PATHOLOGICAL BOOK.—Consecutive pathological number for hospital year, admission No., name, organ or tissue, date of report, anatomical diagnosis, pathologist.

8. X-RAY BOOK.—Consecutive x-ray number for hospital year, date, admission No., name, section of body, number of plates, x-ray diagnosis, reporter.

9. OPERATION CHART.—Admission No., ward, date, operation No. (filled in by operating room nurse), name, examination (dyspnea, edema, false teeth, heart, lungs, urine, arteriosclerosis), previous anesthesia, preliminary medication, service, time for operation (above data to be filled in ward), surgeon, assistant, anesthetic, anesthetizer, stimulation, chart for recording duration of anesthesia and of operation (amount of anesthetic, the pulse, respiration, color, pupil, and blood pressure), description of operation (position, incision, technic), (above data to be filled in by anesthetizer), recovery—nausea and vomiting—

Anesthetic started, X. Operation started, O. Operation completed, C.



immediate (noted in the operating room), secondary, post-operative complications—(above data to be filled in ward).

10. PATHOLOGICAL CHART, half standard sheet.—Admission No., ward, date, pathological No. (filled in by pathologist), name, age, service, Dr., organ or tissue, clinical history in brief, clinical diagnosis (above data to be filled in operating room or ward), date of report, anatomical diagnosis, pathologist.

11. X-RAY CHART, half standard sheet.—Admission No., ward, date, x-ray No. (filled in x-ray room), name, service, Dr., radiograph wanted of, position or direction, information sought, directions as to dressings (above data to be filled in ward), x-ray report and diagnosis, reporter.

12. NAME CARD, 3 by 5.—Name, address, name of (relative, friend), address of same, nearest telephone No., service, ward, transfer (service, ward, date), Dr., intern, discharge diagnosis, discharge No., admission No.

13. DIAGNOSIS CARD, 3 by 5.—Disease, complications, name, surgeon, physician, discharge No., operation No., x-ray No., pathological No., result.

14. LEDGER CARD.—Name, admission No., address, admission date, ward, time (a. m., p. m.), private room, private patient (Dr.), transfer, date, rate of board, security, address of same, deposited in advance, discharge No., discharge date, days in house, payments.

15. AMBULANCE BOOK.—Consecutive ambulance number for hospital year, date, name, address, place of call, destination, diagnosis, recommended by Dr., time (leaving, return, a. m., p. m.), surgeon, driver.

16. ACCIDENT ROOM BOOK.—Consecutive accident number for hospital year, date, time (a. m., p. m.), name, address, place of accident, nature of accident, treatment, referred to O. P. D. (Dr.).

17. O. P. D. ADMISSION BOOK.—Consecutive admission number, date, name, address, dates of treatment, discharge, date, transfer to, date, reentry.

18. O. P. D. DISCHARGE BOOK.—Consecutive discharge number, date, name, diagnosis and complications, condition, recommended to.

19. O. P. D. FIRST PAGE OF HISTORY, 6 by 8 card.—Admission No., date, name, address, occupation, birthplace, M. F. M. S. W. B. W., age, department, provisional diagnosis, diagnosis, surgeon, physician, transfer to, date, discharge, condition on discharge, dates of treatment.

20. BLANK HISTORY CARDS.

21. O. P. D. TICKET.—Admission No., name, address, department.

22. O. P. D. NAME CARD, 3 by 5.—Name, address, admission No.

23. O. P. D. DIAGNOSIS CARD.—Disease, admission No., name.

24. O. P. D. TO HOUSE, perforated slip.—Name —— is recommended by the —— O. P. D. for admission to the house, O. P. D. admission No.; name ——, O. P. D. admission No., O. P. D. service, date, diagnosis, complications, treatment in O. P. D., physician or surgeon, diagnosis on discharge from house, complications, treatment in house, physician or surgeon, house discharge No., operation No., pathological No., x-ray No.

25. HOUSE TO O. P. D., perforated slip.—Name —— is recommended by the —— service to the O. P. D., house discharge No.; name ——, house discharge No., service, date, address, occupation, age, M. F. M. S. W. B. W., days in house, diagnosis on discharge from house, complications, treatment in house, physician or surgeon, operation No., pathological No., x-ray No., diagnosis on discharge from O. P. D., complications, treatment in O. P. D., physician or surgeon, result, O. P. D. admission No., date of discharge from O. P. D.

26. KEY TO THE ADMISSION NUMBERS.—Slips of paper containing a consecutive list of admission numbers, with the corresponding discharge number entered opposite each.

27. SLIPS FOR CONVENIENCE AND AIDS TO MEMORY.—Not permanent records. Example, an ambulance slip given to the surgeon when leaving on an ambulance call.

OPERATION OF THE NUMERICAL SYSTEM OF RECORDS

1. AMBULANCE.—On returning from an ambulance call, the surgeon makes the proper entry in the ambulance book (15) in the main office, under the consecutive number. The ambulance book is of the loose-leaf type. At the end of each hospital year the leaves are permanently bound and filed in the record room.

2. ACCIDENT ROOM.—For each patient treated in the accident room the proper data are entered in the accident room book (16) kept in the accident room, under the consecutive number. The accident book is of the loose-leaf type. At the end of each hospital year the leaves are permanently bound and filed in the record room. For each accident room case not admitted to the house an O. P. D. history card (18) is made out. These cards are sent to the O. P. D. each morning and filed within the O. P. D. histories.

3. ADMISSION TO THE HOUSE.—When a patient is admitted to the house, the admitting physician or a clerk in the main office fills in the proper data in the admission book (1), under the consecutive admission number, fills out the first page of the history (3), makes out the name card (12) and the ledger card (14). The admission books are kept in the main office, but are filed in the record room when full. The first page of the history accompanies the patient to the ward. The name card is filed in an alphabetical index in the office while the patient is in the house. The ledger card is filed in the bookkeeper's office under the headings—patients in house, open accounts, and closed accounts.

3. MEDICAL HISTORIES.—The histories are continued on the first sheets and subsequent sheets (4) of the same size.

4. OPERATION RECORDS.—A patient sent to the operating room is accompanied by an operation chart (9) which has been started in the ward. After the operation the proper data are filled in by the anesthetizer or a clerk at the dictation of the surgeon. The operating room nurse makes the proper entry, under the consecutive operation number, in the operation book (6), kept in the operating room. At the end of each hospital year the sheets of the operation book, which is of the loose-leaf type, are permanently bound and filed in the record room. The nurse also enters the operation number on the operation chart. This chart is returned to the ward as soon as possible and accompanies the first page of the history.

5. RECORDS OF OTHER MINOR DEPARTMENTS, AS X-RAY ROOM OR PATHOLOGICAL LABORATORY.—The procedure in these departments is the same as in the case of operation records.

7. TRANSFER TO A DIFFERENT WARD OR SERVICE.—The proper data are entered on a transfer or discharge slip (5). This slip is sent to the bookkeeper's office and the main office, where the required corrections are made in the indices and the fact noted on the slip in the spaces designated for the purpose. The slip is then sent to the ward and the transfer is made. The history accompanies the patient on transfer.

8. DISCHARGE FROM THE HOUSE.—Before a patient can be discharged, the diagnosis and complications must be entered on the history and signed by the visiting physician or surgeon. When the patient is to be discharged, a discharge or transfer slip (5) is properly made out in the ward. This slip is sent to the bookkeeper's office and the main office, where the records in these offices are completed. The ledger card is transferred to the section of open or closed accounts. The name card is removed from the index and sent to the ward with the discharge slip, which has been checked up in the two offices. A clerk also makes the proper entry in the discharge book (2). This is a loose-leaf book kept in the office and numbered consecutively. When full, the discharge books are permanently filed in the record room. When the discharge slip has been returned to the ward, the patient may be discharged. The completed history is sent to the main office as soon as possible after discharge, and is accompanied by the name card. In the office a clerk enters the discharge number on the history, which is then sent to the record room.

9. RECORD ROOM.—When a history reaches the record room, the clerk files the name card (12) in its alphabetical order in a file by name. The clerk also makes out a diagnosis card (13), entering the discharge number, the numbers of operation sheets, pathological sheets, or x-ray sheets in the spaces designated on the card and files it in a file arranged with the headings of the nomenclature chosen. This file is subdivided by years. The history is filed numerically by discharge number. The record room clerk keeps duplicate keys (26) to the admission numbers. These keys serve as a check on the accuracy of the system and are available for research work.

10. OUT-PATIENT RECORDS.—A new out-patient is given a ticket (21), which he keeps and presents each time he visits the O. P. D. It is taken up when he is discharged. All O. P. D. records are kept in the O. P. D. record room. In a small

clinic, histories are filed alphabetically by name and no name index is necessary (19, 22). In a large clinic the histories are filed numerically by admission number. In either case the cards of discharged patients are kept in a file separate from the active cases. On admission a clerk makes the proper entry in the O. P. D. admission book (17) and fills out the first history card (19). The name card (22) is filled out and filed alphabetically. Subsequent histories are written by the physician or surgeon on the history cards (19, 20). When a patient presents a ticket at the O. P. D. office or record room, a clerk enters the date in the admission book (17) under the admission number learned from the ticket (21). The history is taken from the file and sent to the proper department. At the close of the clinic the histories are returned to their places in the file. When a patient is transferred to another department, the fact is noted in the admission book and on the first history card. When a patient is discharged, the fact is entered in the admission book and on the first history card. It is also entered in the O. P. D. discharge book under the consecutive discharge number.

11. DISCHARGE FROM HOUSE TO O. P. D.—In the case of a patient recommended to the O. P. D. the house doctor makes out a house to O. P. D. slip (25). The first part of the slip is given to the patient, who presents it at the O. P. D. for admission and exchanges it for a ticket (21). The second part of the slip is sent to the O. P. D. record room, where it is attached to a history card, which is immediately made and filed in the O. P. D. system. The slip is later called to the house record room as a part of the end result system.

12. DISCHARGE FROM O. P. D. TO HOUSE.—In the case of a patient recommended to the house, the surgeon or physician fills out an O. P. D. to house slip (24). The first part of the slip is given to the patient, who presents it at the main office for admission. The second part is sent to the main office, where it is placed on file until the patient appears. On admission the slip accompanies the patient's history, and on discharge from the house it is returned to the O. P. D. record room, where it is attached to the original O. P. D. history.

13. CHECKS ON THE ACCURACY OF THE SYSTEM.—Each night at midnight the night superintendent of nurses takes a census of the patients in the house. The next morning the result is compared with the office records. The last discharge number subtracted from the last admission number should equal the total number of patients obtained from the actual count. The index in the main office and the patients in house from the ledger should give the same figure. In case a discrepancy appears, it may be readily corrected. The accuracy of the operation reports, x-ray reports, or pathological reports, as filed in the record room, may be checked up at any time from the operation or other special book, a key to the admission numbers, and the filed records or diagnosis cards. Loss of a history on the way to the record room will be detected by absence of its discharge number from the admission number key.

14. END RESULT SYSTEM.—By consulting the discharge book (2) on stated days, a clerk finds what patients were discharged at a stated time before and sends to each, except to those who were recommended to the O. P. D. or readmitted to the house, a form letter reading as follows:

..... Hospital, Discharge No., Date.

About a year ago you were a patient at this hospital. We will be glad to hear from you as to your present condition, or to have you call at the superintendent's office, bringing this letter with you.

Yours truly,

....., Superintendent.

For the O. P. D. cases the house to O. P. D. slips (11) are called for. All replies are noted in the place designated in the discharge book (2) and are sent to the record room, where they are filed with or entered in the histories. When no reply to the first letter is received, as noted from the discharge book, a second letter is sent and the fact noted in the discharge book.

15. EFFICIENCY OF THE SYSTEM. — Among many tests of the efficiency of the system, the following may be made:

To find the history of any patient whose name is known. Consult the name index (12). Learning the discharge numbers, the histories may immediately be found filed under these numbers.

To collect a series of cases of any disease. Consult the diagnosis index (13). By noting the discharge Nos., the histories of the cases may be readily consulted.

To collect a series of operations for any condition. Consult the diagnosis index. The operative cases will be designated by the operation numbers under the proper heading. By noting the discharge Nos., the histories may readily be referred to.

To find a series of operations for any condition by one surgeon. Consult the diagnosis index. The operations and the name of the surgeon will be found under the proper headings. By noting the discharge Nos., the histories of the cases may be consulted.

To find all the operations performed by one surgeon in any period. Consult the operation book (6). With an admission number key (26) the discharge numbers may be checked up and the histories of the cases readily found among the filed histories.

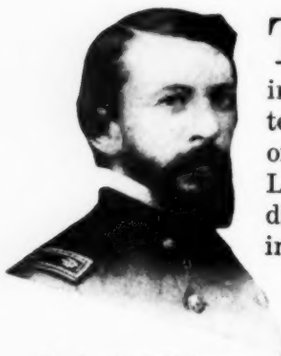
To find a series of cases of anesthesia. Consult the operation book (6). With an admission No. key (26) the discharge Nos. may be checked up and the histories found among the filed histories. The results alone may be found in the same manner from the discharge book (2).

Many similar tests of the system may be made.

THE LETTERMAN UNITED STATES ARMY HOSPITAL AT SAN FRANCISCO

Institution Is Unique in Being at Once a Government Hospital and a Civil General Institution Open to the People of the City—Newer Buildings Are Good, but Were Expensive, Due to Neglect on Part of Congress

By OUR SPECIAL CORRESPONDENT, WASHINGTON, D. C.



Dr. Jonathan Letterman.

THE Letterman General Hospital was established in 1899, and was named Letterman to honor the memory of the late Dr. Jonathan Letterman, who rendered distinguished services during the Civil War in effecting an organization of the medical department of the army in the field, and saved the army by this organization from much of the suffering that is usually experienced in war.

The hospital is used as a base hospital for the Philippines and Hawaii, as a post hospital for the Presidio, San Francisco, Fort Winfield Scott, and several smaller posts in the harbor of San Francisco, and as a general hospital for the western part of the country. It is the largest general hospital in the army. The number of patients admitted during last year, including civilians and general prisoners, was 2,623. This was a decrease of 160 from the preceding year.

An active surgical clinic is maintained at the hospital. Last year there were 34 operations for appendicitis, 24 for hernia, 22 for hemorrhoids, and 125 gynecological. In the gynecological department 56 women were delivered at term, and there were four stillbirths. Two Cæsarean sections were successful. There were 1,791 cases in the eye, ear, nose, and throat clinic, not including treatment and sprays. The dentist reported 1,439 affected teeth treated, with 3,499 sittings.

A large department laboratory is maintained for the use of the hospital and for the special work of the posts in the western department. There are 12 medical officers, 2 dental surgeons, 41 female nurses, 158 hospital corps men, and 37 civilians on duty at the hospital. The capacity of the hospital is about 520 beds.

The original buildings were paid for from the appropriation of $50,000,000 for national defense, made to meet the expenses of the war with Spain, and the initial cost of the structures was about $350,000. The buildings first erected, intended for temporary use, were constructed of wood. Those of recent date are of concrete. The present commanding officer, Colonel Guy L. Edie, medical corps United States army, has inaugurated a project that contemplates the substitution of all the wooden units with concrete structures. This scheme will be carried out as fast as funds are authorized by the secretary of war. A special appropriation by Congress would not only expedite the work, but save the Government thousands of dollars. The recent improvements have been made in $20,000 installments, the amount being fixed by the provision of an old statute, passed in 1853, which prohibits the erection of any structure the cost of which shall exceed $20,000 without special authority of Congress.

The buildings were shaken considerably during the San Francisco earthquake, but, being of wood construction, probably withstood the disturbance better than if they had been constructed of a more substantial material. Congress made a special appropriation of $45,000 to repair the damage done, and there has been upward of $500,000 spent at the institution for repairs and additions since the original buildings were constructed, about two-thirds of this amount being used for new construction. All the buildings erected in the last few years, with the exception of the officers' ward, which is frame, are of reinforced concrete construction, with stucco finish on the exterior and red tile roofs. With abundance of foliage on the reservation, plenty of flowers, and military policed grounds, the general appearance of the group of buildings is very pleasing.

The new buildings are officers' ward; ward building; isolation ward; insane ward; kitchen; laundry, dry cleaning, and disinfecting building; female nurses' quarters; two hydrotherapeutic wards; female ward for special surgical cases; and power, heat, light, and refrigeration plant.

The officers' ward furnishes accommodations for twenty-two sick officers. Two rooms have private baths, and the other rooms are provided with bath for every two rooms, with a separate lavatory in each room. The basement contains the kitchen, pantry, with dumbwaiter service to pantry and serving room on floors above, room for vacuum cleaning apparatus, trunk room, room for help and room for cooks, with adequate toilet facilities. In addition to these rooms, a complete hydrotherapeutic outfit has been installed on this floor, with tile floors, tile wainscoting, and marble trimmings throughout. A glance at the floor plans will show the general arrangement, consisting of

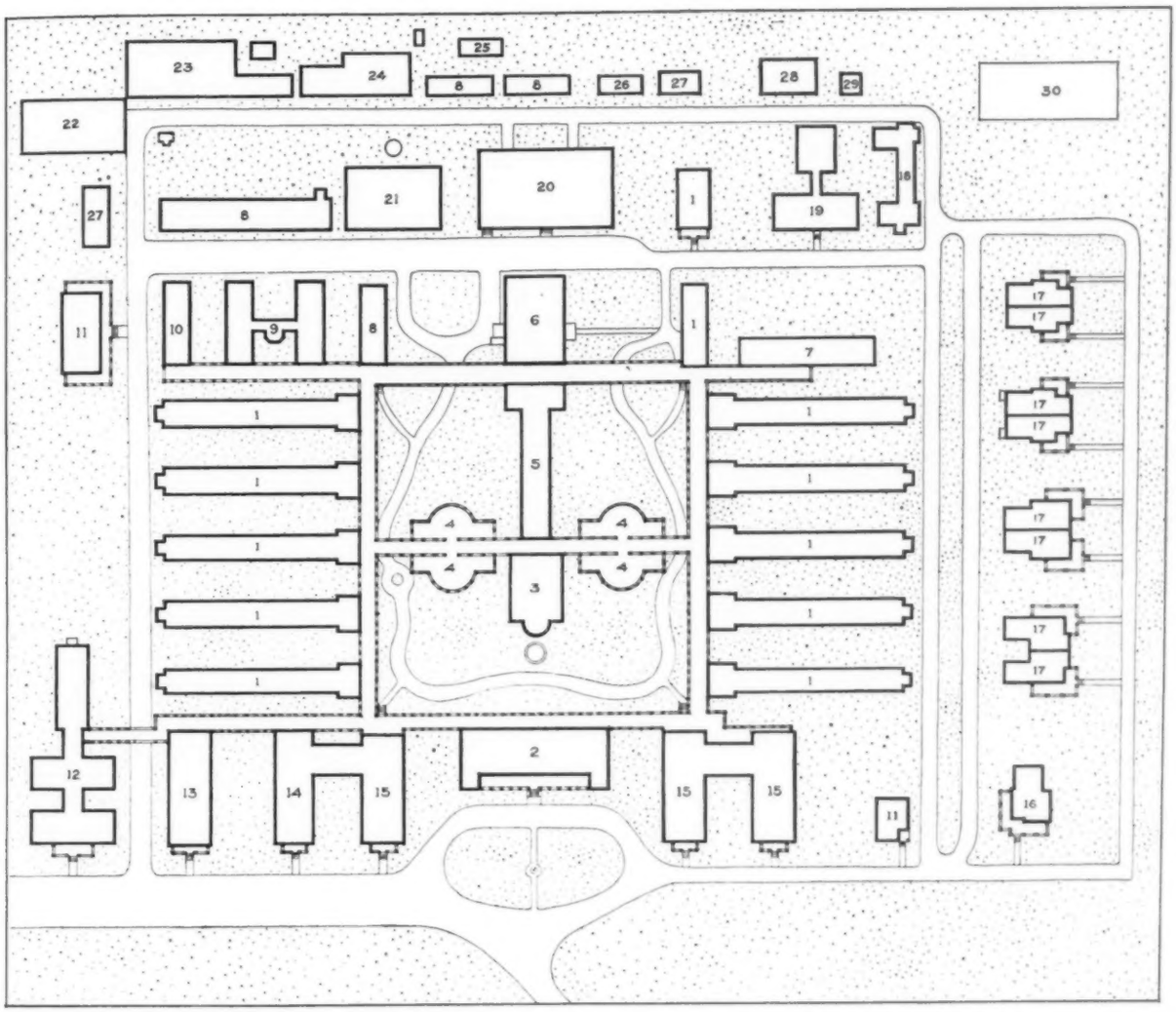


Fig. 1. Letterman United States Army General Hospital. Block plan.

1. Wards.
2. Administration building.
3. Operating pavilion.
4. Solariums.
5. Dining room.
6. Kitchen.
7. Laboratory.
8. Store houses.
9. Hydrotherapeutic wards.
10. Maternity wards.
11. Isolation wards.
12. Female nurses' quarters.
13. Officers' wards.
14. Post exchange.
15. Barracks.
16. Commanding officers' quarters.
17. Officers' quarters.
18. Greenhouse.
19. Insane wards.
20. Disinfecting and sterilizing building.
21. Power house.
22. Wagon shed.
23. Stable.
24. Shop.
25. Shed.
26. Paint shop.
27. Garage.
28. Store house for combustibles.
29. Animal house.
30. Tennis court.

a reception room, douche room with shower, perineal, shampoo, continuous bath, sitz bath and control table; cabinet room, pack room, massage room, and lounge room, with dressing rooms, toilets, etc. The first floor has a reception room, dining room, pantry, linen room, utility room, and wards and toilets for nine officers. The second floor has wards and toilets for thirteen officers, serving room, utility room, linen room, and solarium. All the toilets, pantries, serving rooms, and utility rooms have tile floors and wainscoting, and are equipped with modern plumbing fixtures. The messing for the officers' ward is separate from the other pavilions, the expense of which is met by the sick officers, who are charged a per diem rate while in the hospital.

The main ward buildings are one story and basement, each ward having a capacity of 40 beds, and these are connected to the other buildings by corridors. Four large solariums, with glass sides and roofs, are on the sides of the corridor approaching the mess room, with an outlook on flower ornamented courts.

The insane ward building is a detached structure, being practically a fireproof building. The first floor provides a recreation room, dining room, diet kitchen, hydrotherapeutic room, toilets, linen room, locker room, office, attendants' room, five small wards, and a wire-screened porch. The second floor contains a recreation room, toilet rooms, attendants' room, fifteen small wards, and a wire-screened porch. The floors of the diet kitchen, toilets, and hydrotherapeutic room are tile, with tile wainscoting. These wards are for temporary detention only. During the last year there were 143 cases treated—5 civilians, 7 gen-

Fig. 2. Letterman United States Army General Hospital. Administration building.

eral prisoners, and 131 officers and enlisted men. Of this number 23 were transferred to the Government hospital for the insane at Washington, D. C.; 10 were returned to duty, 1 died, 12 transferred to recruiting officers for disposition, 1 transferred to another hospital, 4 civilians left the hospital, 9 sent home for discharge, 78 discharged on certificates of disability, 4 discharged without honor, and 1 discharged on account of the expiration of his term of enlistment.

The isolation ward building is detached, and has a capacity of about 20 beds. The building is intended for cases of doubtful diagnosis and those requiring complete segregation. The entrances to each floor are by outside stairs only. The basement has a disinfecting apparatus and store rooms. The first floor contains three wards, with separate toilet for each, and diet kitchen, linen room, nurses' room, and office. The second floor has six wards, each with a separate toilet and a linen room.

The laundry, dry cleaning, and disinfecting building is one of the best of its kind, thoroughly equipped with all modern appliances. The structure is one story and basement, 75 by 120 feet, with as much light on all sides and roof as possible.

The female nurses' quarters were erected in three installments, this method and a peculiar condition of the site and foundations having influenced the plan. The exterior is like the other new buildings, stucco on concrete and red tile roof. The interior finish is white enamel, excepting the doors, which are birch, stained to imitate mahogany. Accommodations are provided for a head nurse, who has two rooms and bath, and fifty-six nurses, who have separate rooms, each room containing a lavatory and a large closet specially arranged, with hanging rods for dresses and electric light. The toilet rooms and baths are conveniently located for each group of nurses, access being possible without crossing the main hallways. The building is also provided with an office, reception room, library, sitting room opening on to a liberal porch, and store and trunk rooms. The dining room, kitchen, pantries, etc., are in the basement, but the floors are practically at grade, so the rooms have abundance of light and are very desirable. The dining room is finished the same as the other portion of the building and wainscoted with a green-gray burlap. The kitchen, pantries, refrigerator room, and toilets throughout have tile floors and tile wainscoting.

The quarters for the medical officers on duty at the hospital are very commodious.

The new kitchen building is a modern structure, with the latest equipment. The basement contains commissary store room and office, general storage rooms, cook's room and toilets, vegetable preparing room, four cold storage rooms, butcher shop, and an electric elevator to the main kitchen floor above. The main kitchen is 40 by 50 feet, having a large pantry, with refrigerator and food cart room. The diet kitchen is a room about 20 by 30 feet, with its separate pantry and a special room for the dietitian.

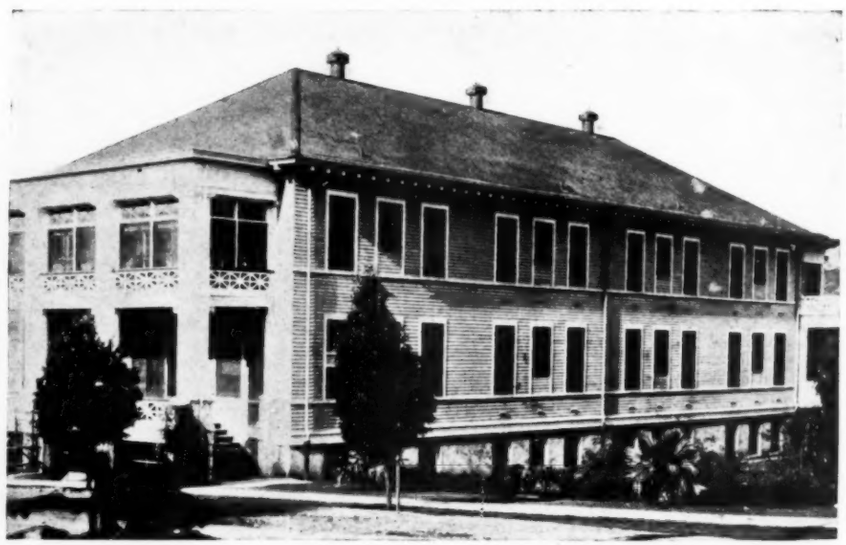


Fig. 3. Letterman United States Army General Hospital. Officers' ward.

The two pavilions for general hydrotherapeutic

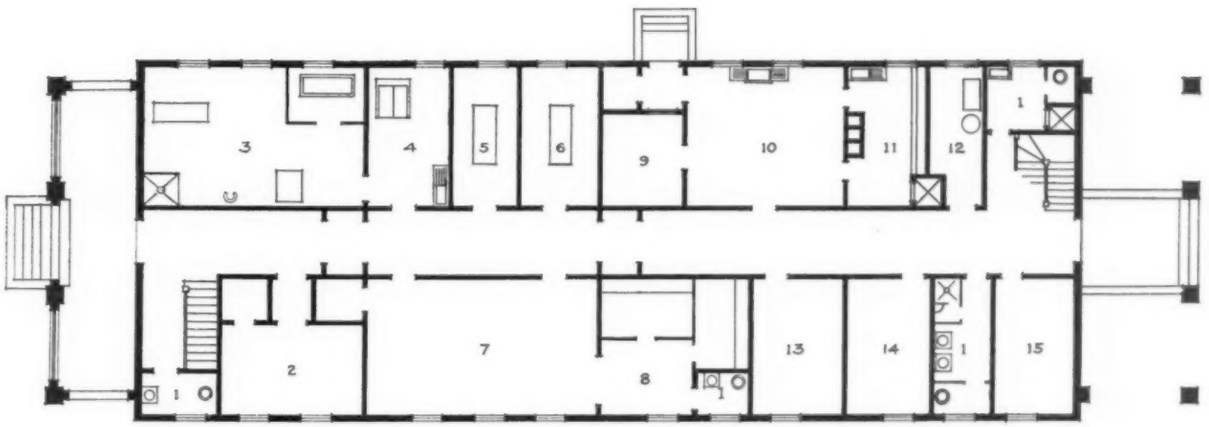


Fig. 4. Letterman United States Army General Hospital. Basement plan of officers' ward.

1. Toilets.
2. Reception room.
3. Douche room.
4. Cabinet room.
5. Pack room.
6. Massage room.
7. Lounge room.
8. Dressing rooms.
9. Store room.
10. Kitchen.
11. Pantry.
12. Vacuum cleaner.
13. Help.
14. Trunks.
15. Cooks.

Fig. 5. Letterman United States Army General Hospital. First floor plan of officers' ward.

1. Toilets.
2. Reception room.
3. Attendant.
4. Wards.
5. Dining room.
6. Pantry.
7. Linen room.
8. Utility room.
9. Connecting corridor.

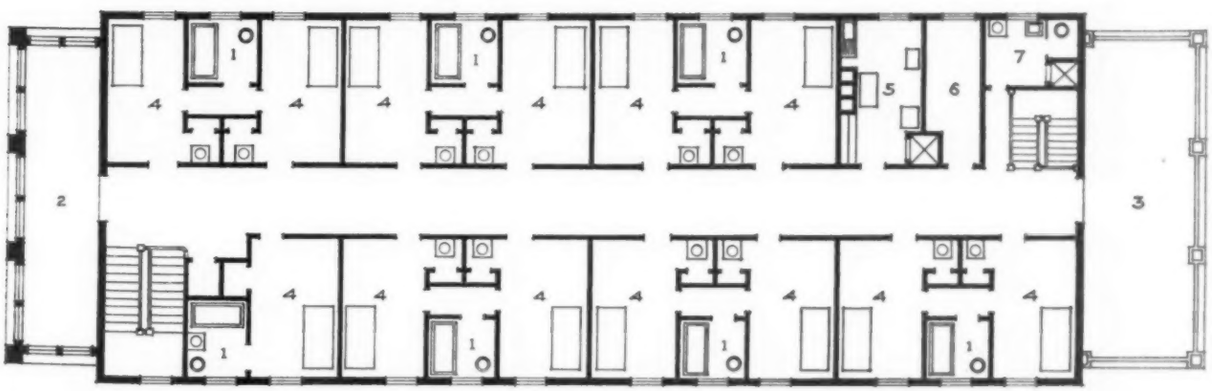


Fig. 6. Letterman United States Army General Hospital. Second floor plan of officers' ward.

1. Toilets.
2. Solarium.
3. Porch.
4. Wards.
5. Serving room.
6. Linen room.
7. Utility room.

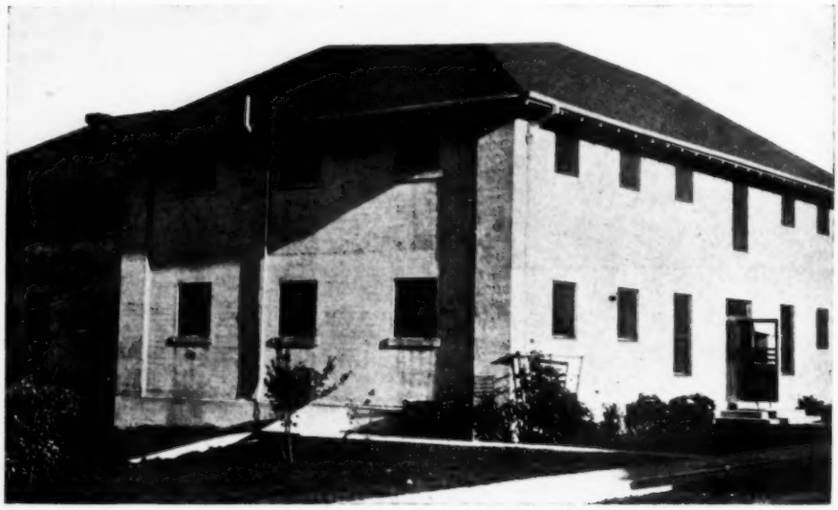


Fig. 7. Letterman United States Army General Hospital. Insane ward.

treatment are of concrete, with stucco exterior, and red tile roofs, the buildings being one story and basement. The first floor of the treatment pavilion is arranged as indicated by the illustration, a detailed description of which is as follows: The pavilion is connected to the main group by corridors. On the left of the entrance hall is the reception room. The preparation room is arranged with dressing rooms, one recovery room, and toilet, the latter accessible from the other special rooms. The cabinet room contains one electric and one hot air cabinet, both reclining. The douche room has a control table, perineal, shower, sitz bath, and shampoo table. This room has a wood slat floor. The bath room has a continuous bath, arranged so that the Nauheim apparatus can be used. The pack room contains a couch, fomentation sink, and blanket warmer. The body and joint baking room contains the massage table and various joint and body baking equipments. The syphilitic room has a shampoo table, electric cabinet, sink, and blanket warmer. The colon irrigation room contains an irrigation table, sink, lavatory, and water closet. The floors throughout, with the single exception of the douche room, are of tile, and all walls are wainscoted with tile 5 feet high, except the douche room, where the wainscoting is marble 7 feet high. All partition work in the various rooms is marble. The treatment pavilion is connected to the hydrotherapeutic ward

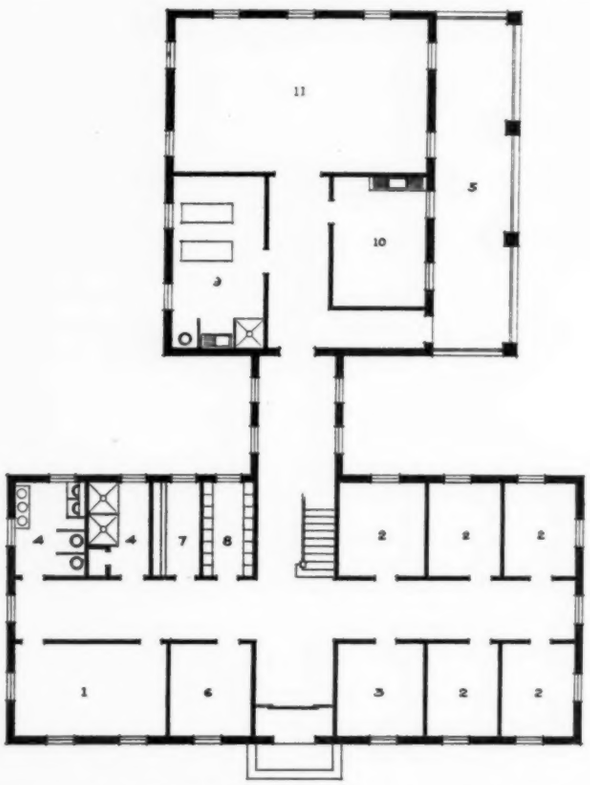


Fig. 8. Letterman United States Army General Hospital. First floor plan of insane ward.

1. Recreation room.
2. Wards.
3. Attendant.
4. Toilets.
5. Porch, wire-screened.
6. Office.
7. Linen room.
8. Locker room.
9. Hydrotherapeutics.
10. Diet kitchen.
11. Dining room.

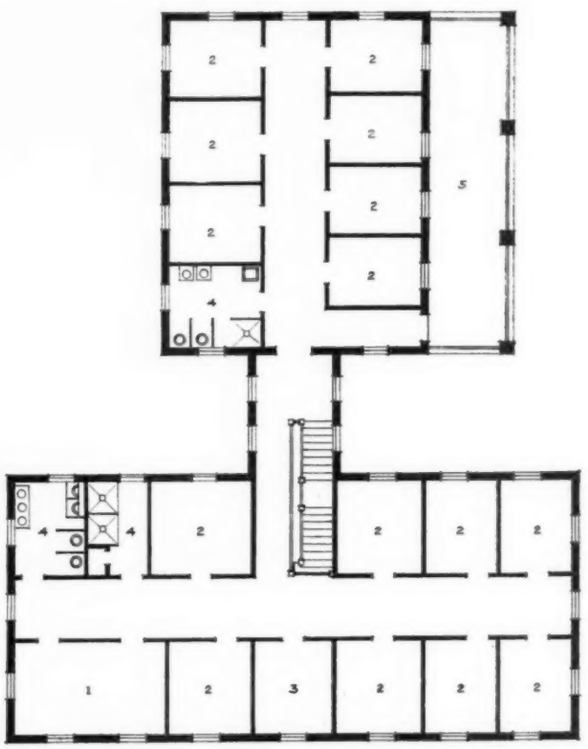


Fig. 9. Letterman United States Army General Hospital. Second floor plan of insane ward.

1. Recreation room.
2. Wards.
3. Attendant.
4. Toilets.
5. Porch, wire-screened.

Fig. 10. Letterman United States Army General Hospital. Laundry, dry cleaning, and disinfecting plant.

pavilion by corridor containing a small lounge room. The ward pavilion has one ward of 8 beds, nurses' room, linen room, toilet room, diet kitchen, and three recovery rooms. The toilet and diet kitchen have tile floors and tile wainscoting, and are equipped with modern plumbing fixtures. It is the intent to equip the rooms in the basements of these two pavilions with modern gymnastic appliances, to augment the efficiency of the hydrotherapeutic treatment.

The female pavilion for special surgical cases contains one 4-bed ward, three 1-bed wards, operating room, wash room, linen room, nurses' room, diet kitchen, and toilet rooms. This pavilion is equipped with the most modern appliances. The female members of the families of the officers and enlisted men are treated in this pavilion.

The central power plant furnishes power to all the mechanical equipment, including the refrigeration and ice-making machinery, laundry and shop machinery, and heat and light for the entire group of buildings. The building for the plant is one of the recent structures, and has been erected of brick. All the pavilions are equipped with the most modern fire protection system.

The following is a list of the medical officers of the army on duty at the hospital, giving their respective duties:

Guy L. Edie, colonel medical corps, commanding. Clarence H. Connor, captain medical corps, chief of eye, ear, nose and throat service. John W. Hanner, captain medical corps, chief of surgical service. Lloyd L. Smith, captain medical corps, chief of medical service. Laertus J. Owen, captain medical corps, assistant to chief of surgical service; summary court. Frank W. Weed, captain medical corps, adjutant; signal, ordnance, and recruiting officer; C. O. detach. H. C.; in charge of post schools, printing office, and dispensary; registrar of sick and wounded records; C. O. detach. of patients; officer in charge of baggage room. Henry J. Nichols, captain medical corps, chief of laboratory service; sanitary inspector. Morrison C. Stayer, captain medical corps, quartermaster; accountable officer for property of the medical department; in charge of police; officer in charge of laundry. Wayne H. Crum, captain medical corps, mess and post exchange officer; librarian. James L. Robinson, captain medical corps, assistant to chief of surgical service. Eugene G. Northington, captain medical corps, assistant to chief of medical service. George H. Cassaday, first lieutenant, dental surgeon, chief of dental service. Mortimer Sanderson, first lieutenant, dental surgeon, assistant to chief of dental service.

Fig. 11. Letterman United States Army General Hospital. Isolation ward.

Almost all the older hospitals of Paris were established by the kings. Down to the Revolution almost all had their independent administration, but an exception was the Hôtel Dieu, which was under the immediate protection of the kings and under the supervision of the clergy.

To obtain good drinking water is one of the most important questions for a small country hospital. In this respect the hospitals in the cities have much less difficulty, as they are usually supplied by city water works, but a country hospital must usually provide for its own supply.—Helwes.

PLUMBING AND HOT WATER SYSTEMS FOR HOSPITALS

Expensive Fixtures Not Always Most Appropriate—Piping Must Be Carefully Selected—Overheating Water Is Waste of Fuel—Polished Metal Uncared for Gives Untidy Appearance

By FRANK SUTTON, C. E., New York

THE plumbing and drainage system of a hospital is probably one of the most important adjuncts to the equipment, and therefore the system to be installed and the types of fixtures to be selected should be considered with extreme care. The tendency in a great many instances, from the writer's observation, is that the type of fixtures selected, while very useful, at the same time is too elaborate and too costly, whereas there are other articles on the market that will answer the same purpose and give good results.

In the design of a plumbing and drainage system for a hospital the question of sewage disposal is, of course, of vital importance, and, if the hospital is not so situated that the sewage can run into some public sewer, the only alternative is some form of sewage disposal system. This particular branch of the subject is so large and varied that a special article could be written on the different forms of systems that could be employed. In this article it will be well, therefore, to simply take up the question of the internal arrangement of the building.

There are two forms of systems that can be used—that is, as far as the soil, waste, and vents are concerned—either to have the entire installation built of galvanized wrought-iron or steel pipe, or to have all vertical soil, waste, and vent lines built of cast-iron. There seems to be considerable difference of opinion as to which is the most advisable to adopt, and in a number of instances the galvanized iron is adopted, due to the fact that it takes up considerably less room, but at the same time it is more expensive. If room enough can be procured in the construction of the building, in the writer's opinion the cast-iron system is as good as, if not better than, the wrought-iron or steel, due to the fact that cast-iron is practically indestructible, whereas wrought-iron or steel, due to the action of the sewage, will eventually eat out, and a new system will have to be installed. The only precaution in installing a cast-iron system is that the pipes should be put together very carefully, as lead-run joints are apt to leak, thereby causing considerable trouble.

In connection with the water supply the writer has noticed in a number of instances that there is a tendency to install water filters regardless of the condition of the water. I do not mean to say that water filters are not useful and important, as they are most important in certain instances, but I have known cases where water has been supplied to hospitals from deep wells or from water companies where the water for twelve months in the year is absolutely clear, and no suspended matter or dirt whatsoever is apparent. The only cause for installing a water filter is its use to take out suspended matter, as water cannot be treated chemically in a water filter, and, if the water is in such condition that it should be treated to change the properties in the water chemically, a system of water treating apparatus should be installed, which in most instances is elaborate and expensive. Under the circumstances, unless the water is dirty, I cannot see the use of going to the expense of installing filters.

Another important matter which is sometimes overlooked, especially in connection with a large institution, is the supply of hot water, and in a great many cases little or no care is taken to figure out with any degree of accuracy the size of the hot water heater necessary to supply the hot water fixtures. This also applies to the question of the circulating system in order to always have hot water at the fixture, and, further, in connection with the temperature to which the water is raised. Heretofore there has been a tendency to specify a heater to heat the water from, say, 50° F. to 180°. The consequence is that the water, when it comes from the faucet, is generally so hot that it must be mixed with considerable cold water in order to be used. Just as satisfactory and more economical results can be obtained by heating the water to a temperature of, say, 120° or 125°, which is as hot as anyone can endure, thereby saving a waste which is bound to occur by mixing very hot water with cold water. This is a good point to remember in connection with the design of a hot water system.

In connection with the hot water circulation, a compact building with a number of stories would generally circulate the water by gravity, and not much trouble is experienced, but in a group of buildings the writer has noticed that the water is generated at one central point, which is the proper way to do it, but the means of circulation is generally omitted, or there is a separate hot

water tank in each building, which is entirely unnecessary and expensive. The proper way would be to generate the hot water in the main boiler room and then have the supply lines connected with a centrifugal pump, with the circulating line brought back to the pump, thereby keeping the water always in motion. If this is done, no trouble will be experienced in having hot water at the fixtures at all times.

The next question to be taken up, and one which is probably of the most importance in connection with the installation of a plumbing system, is the type and number of fixtures used. In connection with this part of the work it is customary for the architect to select a set of fixtures for the building in conjunction with some fixture manufacturer, and the tendency invariably is to select very expensive material, which in a number of instances the owners cannot really afford.

In what is known as pottery or vitreous ware, there are generally three classes of material, known as class A, B, and C—class A being material which is almost perfect; class B, material which has only slight imperfections; and class C, material which is obviously defective. There is considerable difference in price between these three materials, and, unless the work is for some particular purpose and a large amount of money can be appropriated, the class B material is, without doubt, as good and serviceable as the class A. There is another type of fixture on the market—namely, the enameled iron fixture—which is cheaper yet than the porcelain fixture, and which in a good many instances answers the purpose just as well as the porcelain. In the majority of cases this type of fixture for bath tubs and ordinary lavatories is very serviceable. Of course, when it comes to installing enameled iron slop sinks and other fixtures which are apt to be abused or put to hard usage, it is probably better to use the porcelain or vitreous ware, as eventually the enamel on the iron will crack off, thereby leaving the fixture in a very unsightly condition.

Another important matter to be taken in connection with the installation of plumbing fixtures is the type of faucets to be selected. In a great many instances, if one will go through a hospital building, he will notice that a large number of the faucets are dripping water. This is due to the fact that a faucet of inferior design and construction has been installed. There are, however, a number of good faucets on the market which will stay tight, and the architect should pay particular attention to the selection of this part of the equipment.

Another important item in connection with the fixture is the question of traps in the waste and water supply lines directly around the fixtures. Heretofore there has been a tendency to use a great deal of polished metal, which, when first installed, looks very nice, but if it is not constantly kept polished, will soon give the whole hospital a very untidy aspect. Due to the great expenses in operating a hospital, it is next to impossible to keep a corps of cleaners busy on a large number of fixtures, and it seems to the writer that it would be considerably better if most of this material, instead of being nickel-plated, were rough brass and most of it painted. In this way there is absolutely no care attached to it, and, if the paint wears off, it is a very simple matter to give the pipes another coat of paint.

There are other equipments that should receive careful attention—namely, the main kitchen equipment, serving pantries, diet kitchens, laundries, both in the wash room and in the ironing rooms, but these questions will be taken up in later articles.

In connection with the direct plumbing work which has been considered in this article, the principal items to be considered are the use of water filters, care in the design of the domestic hot water supply, and care in the selection of fixtures.

The Financing of Hospitals

Some day someone will devise a better way of financing hospitals than money raising campaigns. If hospitals are necessary, and they are, then everyone should contribute to their support. The destitute stranger suddenly stricken upon our streets cannot be permitted to remain where he falls. He is taken to a hospital. On whom is that man a charge? On a few generous and charitably inclined people? Not at all. He is properly a charge on the community. Under the present system this man contributes to our hospitals while his neighbor declines to contribute. And yet both have equal responsibilities.

Our present system is largely the result of an ancient but mistaken view. The ideal of individual responsibility is very old. We have not been quick to learn, however, that communities have certain responsibilities that they should discharge. Maintaining hospitals is one of them. We clean the streets at the expense of the general public. We treat the destitute sick at hospitals maintained by means of funds a few people have furnished. It would be just as reasonable to finance our street cleaning department by means of a financial campaign as it is to depend on popular subscriptions to maintain our hospitals. Of course until we get some better way of handling the problem, financial campaigns must be relied on to meet the community needs as far as hospitals are concerned. But, just the same, it is as much the duty of everyone to help support hospitals as it is to compel everybody to help support the schools.—Editorial in Johnstown (Pa.) Democrat.

The Cleveland (O.) public welfare director is urging an appropriation to double the capacity of the city's tuberculosis sanatorium at Warrensville, O. The institution is now caring for 243 patients and has a large waiting list.

PRIVATE ROOM BUILDING OF THE ROBERT PACKER HOSPITAL

Sayre, Pa., a City of Only Eight Thousand People, Can Boast of One of the Most Serviceable Institutions in the Country—The Architecture of the New Pavilion—Some Details in the Organization of the Staff

By ORNAN H. WALTZ, of Gibb & Waltz, Architects, Ithaca, N. Y., and DONALD GUTHRIE, M. D., Chief of Staff

THE Robert Packer Hospital has approximately 9½ acres of land, with a small park on the east and the Episcopal parish playground on the south. The land is practically level in front and slopes slightly to the rear. The original building was the Robert Packer residence, to which was added, as the hospital grew, one-story frame and brick buildings for wards, private rooms, dispensary, operating rooms, and kitchen department, with connecting corridors, and also a two-story nurses' home.

It is planned to gradually replace the present buildings, of frame construction, with two- and three-story buildings of more modern fireproof construction. This will be done from time to time as the hospital finds the means at its disposal.

On account of the growth of the hospital it was found necessary to have immediately additional room for private patients. This fireproof private room building is now under construction, and when completed will increase the capacity to 200 beds. The building is located on sloping ground 63 feet west of the women's building. The sloping ground made it ideal to place the first floor about 6 feet below the other first floors and still give a basement completely above ground on two sides. The basement and first and second floors are connected to the women's building by ramps in the connecting corridor. Off from this connecting corridor are an inclosed ward porch at the first floor level and an open loggia at the basement level. The roof of the building is flat and covered with inlaid slate, and has parapet walls, railings, and a stairway, so that it can be used for convalescent patients. In addition to the inclines or ramps, the basement, first and second floors, and roof are connected by an inclosed fireproof staircase.

The first and second floors contain twenty-four private rooms, one three-bed ward, delivery room, nursery, nursery wash room, two solaria, diet kitchens, utility rooms, bath rooms, linen closets, cleaners' closets with hoppers, and nurses' chart and medicine rooms.

On each of these floors two suites have connecting baths, with private toilet rooms. In the basement are located an isolation department consisting of four rooms and baths and an outside entrance, five orderlies' rooms and bath, store rooms, laboratory, and an autopsy room for the entire hospital, and also machine room. There is a separate outside entrance for the orderlies.

The foundations are of reinforced concrete, and the walls above are all hollow terra cotta, faced on the outside with brick to match the children's ward and operating pavilion. The outside trimmings are of Indiana stone. Floor construction is of the flore dome type of reinforced concrete. The walls and ceilings are plastered two coats, and the bases of all rooms and corridors are to be 6 inches high, of terrazzo and coved out onto the floor. The bath rooms, toilets, utility rooms, and diet kitchens have terrazzo tile floors, and the solaria have tile floors. All other rooms and corridors have heavy battleship linoleum floors.

All room doors throughout are flush veneer oak, 4 feet wide, and have wood transoms above. Doors to stairways are of metal, to match the wood doors. Windows in private rooms have double slide sash, with transoms above. The windows in solaria, connecting corridors, and ward porch have casement sash, with transoms above.

The heating is the one-pipe vacuum system, with a supply pipe running to a distributing pipe duct above the second story corridor ceiling. Each room is lighted by an indirect ceiling fixture, and has side wall plugs about 6 feet above the floor for portable side light fixtures. All rooms and the solaria have silent call signaling systems and telephone connections. Each corridor has two lines of fire hose inclosed in enameled steel cabinets. Cupboards in the pantries are of wood. Bed-pan warmers in utility rooms are set flush with the wall and are of enameled steel. The finish and doors of bath rooms, toilets, utility rooms, and diet kitchens are white enameled, and all other wood finish and doors are oak.

MEDICAL STAFF ORGANIZATION

The organization of the staff of the Robert Packer Hospital has been planned along lines that will give the patients the benefit of a group diagnosis.

The staff is composed of surgeons, diagnosticians, a pathologist, a röntgenologist, and an ophthalmologist. These men are residents in the hospital, and devote all their time to the work

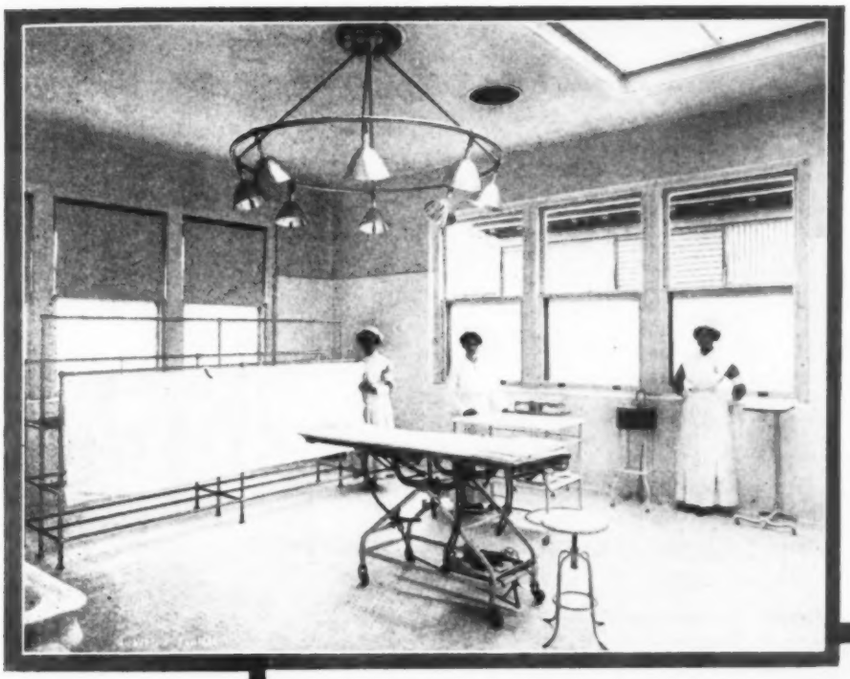


Fig. 1.

except when their services are called for in consultation. No private practice is carried on by any of them.

The staff has associated with them several younger men in the community in the role of clinical assistants, who are following up such lines of work as pediatrics and orthopedics. These men are engaged in private practice.

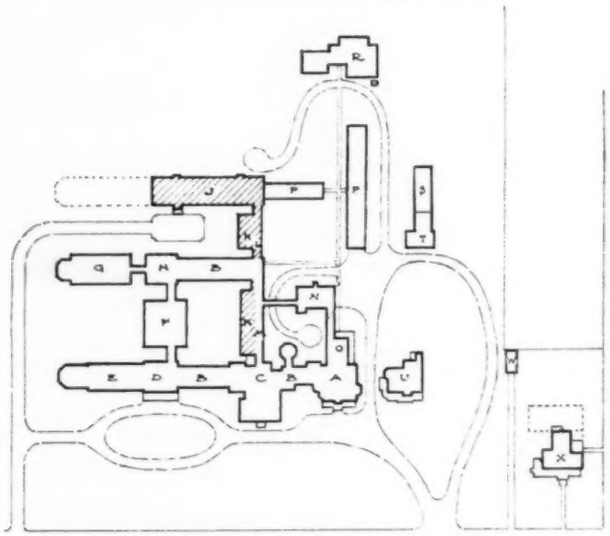
Patients coming for consultation have, first, a careful history taken by one of the clinical assistants, and are referred to the different men for what examinations are thought necessary for a diagnosis; for example, an eye-ground or antrum illumination, a Wassermann test or blood count, x-ray or cystoscopic examination, etc. After the results of the different examinations are all turned in, the case is then sent to one of the surgeons, who agrees or disagrees with the diagnosis. If the case is found to be a chronic one of the medical type, it is referred at once to the patient's home physician, with the results of the examinations, and with suggestions as to the future care of the patient, should the examinations disclose anything that had not been previously found in the case. All surgical or acute medical cases are advised to stay in the hospital. By this arrangement patients from all classes can be given the benefit of the different opinions of men following special lines of work. In former days this privilege was open only to the very rich or to the very poor in the larger cities. The charity cases in the larger hospitals were

Fig. 2.

Fig. 3.

Robert Packer Hospital. Fig. 1—Operating room; note absence of furniture and businesslike appearance. Fig. 2—Exterior of hospital from southeast; note the beautiful lawn at extreme left, with women's and children's buildings nestling among trees. Fig. 3—Women's ward in one of the old buildings.

A. Administration.
B. Ward.
C. Dispensary.
D. Wards and rooms.
E. Wards and rooms.
F. Operating pavilion.
G. Children's building.
H. Rooms.
J. New private room building.
K. New ward porches.
L. Ramps.



M. Sun corridor.
N. Kitchen.
O. Dining rooms.
P. Greenhouse.
R. Heating plant.
S. Ambulance.
T. Laundry.
U. Doctors' residence.
W. Garage.
X. Nurses' home.

Fig. 4. Robert Packer Hospital. General group plan.

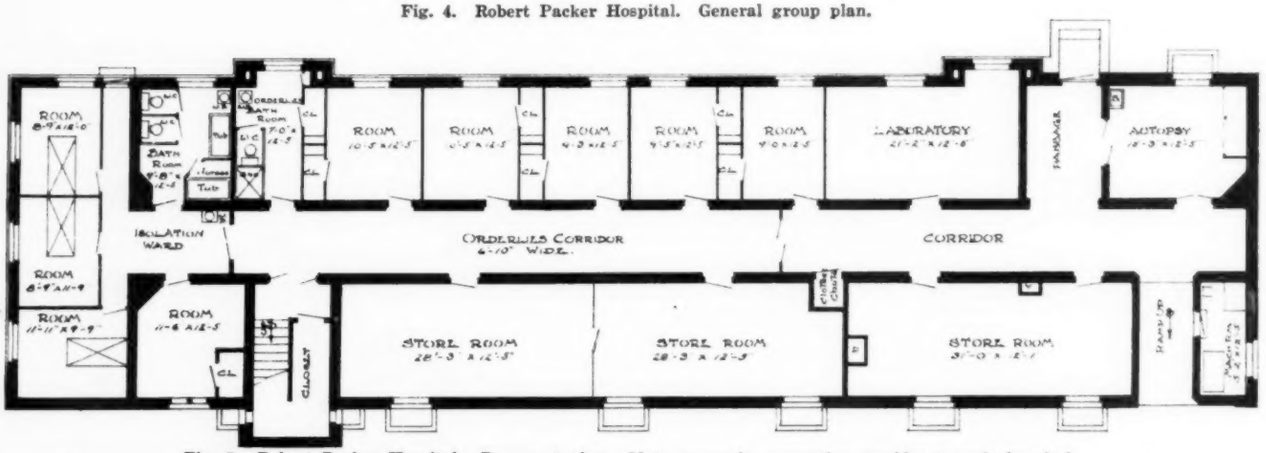


Fig. 5. Robert Packer Hospital. Basement plan. Note ramps in connecting corridor to main hospital.

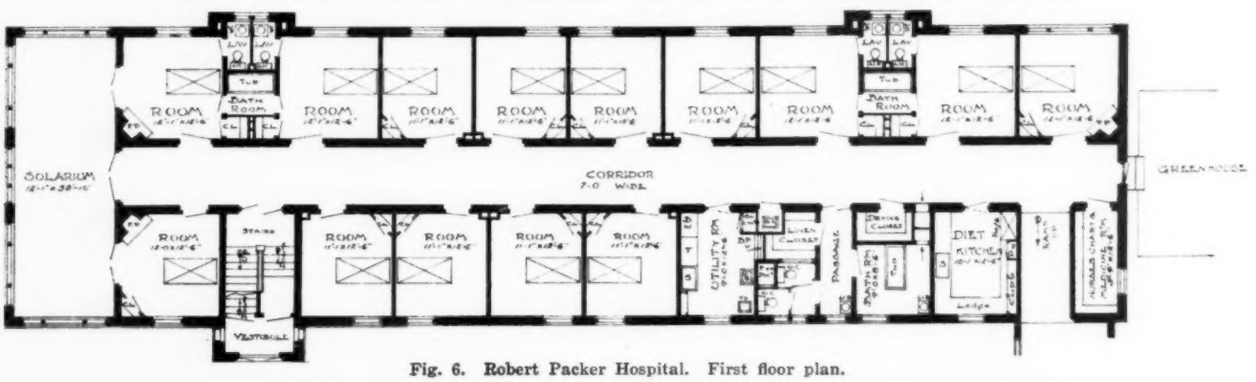


Fig. 6. Robert Packer Hospital. First floor plan.

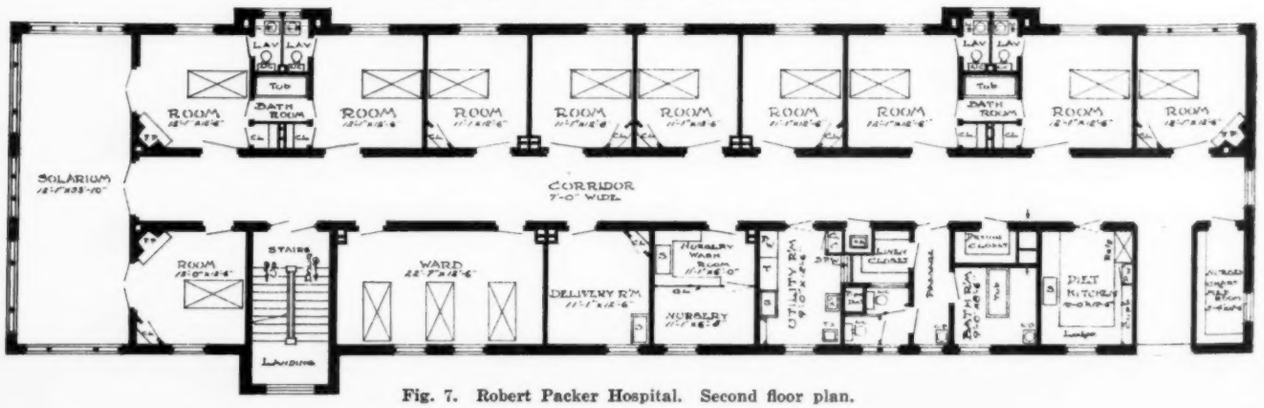


Fig. 7. Robert Packer Hospital. Second floor plan.

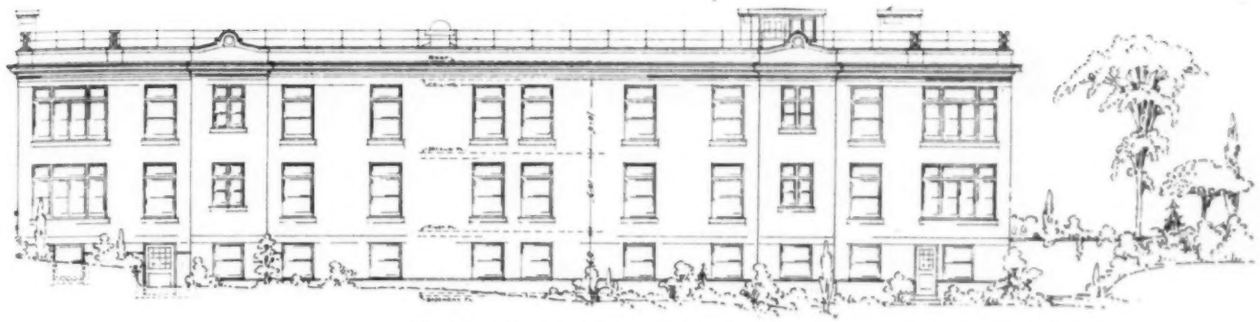


Fig. 8. Robert Packer Hospital. West elevation.

Fig. 9. Robert Packer Hospital. South elevation. Note dotted ramps to main building.

gone over in this manner, as were those who had the means to pay, but the man of a moderate salary was denied this opportunity because of the expense which such examinations would incur. By having a staff work together in the same building like this hospital, examinations can be made for a reasonable charge, which can be met by a patient in very moderate circumstances. Nothing, of course, is asked of those patients whose circumstances will not make it possible for them to pay without hardship, but a charge is made to people in good circumstances, and it is made equivalent to that which would be made by specialists in the larger cities. This plan seems to be the one that will be employed in the future in the smaller communities.

Already groups of men are associating themselves together and are working in consulting offices, using some one hospital to take care of their patients. The reading public knows that obscure cases in medicine and surgery cannot be diagnosticated without the services of specialists, and the men in general practice have already realized this fact.

Misbranding of Diabetic Foods

A diabetic patient who uses ordinary food products can easily avoid those containing a surplus of starch and sugar, as the chemical composition of ordinary foods is usually well known, but in the case of a prepared food advertised for exclusive use in the treatment of diabetes the patient may be misled into using large and injurious quantities of starch and sugar.

The Department of Agriculture has recently conducted a series of analyses and investigations on diabetic foods in order to protect the public from misbranded products. It was shown conclusively that many of the so-called diabetic foods contain as much starch and sugar as ordinary products. Many of these are, therefore, of no use in the treatment of diabetes, and are liable to cause extra difficulties, as they only add fuel to the flames.

The Department of Agriculture has ruled that a diabetic food may not contain more than one-half as much carbohydrates as a normal food of the same class, and that the label must not give the impression that an unlimited quantity of it is suitable for the diabetic patient. It is to be hoped that this ruling will result in the elimination of many fake foods that in the past have been a large factor in the disappointing results obtained in diabetic treatment.

IOWA'S COUNTY HOSPITALS

An Editor Who Was Lukewarm Now Urges More of Them

Keokuk county, Iowa, will vote at the November election on a proposition to build a $25,000 county hospital at Sigourney, the county seat, and, in view of the fact that one of the first county hospitals to be built in Iowa was located at Washington, the following comment from the Washington *Democrat* is interesting:

"We note from the Sigourney *Review* that there is a movement on foot for a county hospital, and we want to urge on the people of our neighboring county the good of such an institution. We have a right to say things for the county hospital, because we were not always so dead sure that it was a good thing. When our people first talked of a hospital we were not enthusiastic about it, as it seemed perhaps more a fad than a necessity. We voted for it, but did it perfunctorily, because of the habit of being 'for' things rather than against them. But we ought to have been for it stronger than horseradish, because it has been the best investment Washington county ever made. We believe every room is full right now, and we honestly believe that a good many lives have been saved and cripples avoided because they had treatment right at hand. By all means, we think Keokuk county ought to vote favorably on a county hospital."

THE SMALL COMMUNITY HOSPITAL—THE PLANNING

The Survey of the Community—Classes of Patients to Be Cared for—Size of the Hospital—Architectural Division by Sexes and Diseases—The Administrative Space—The Operating Suite.

By JOHN ALLAN HORNSBY, M. D., Chicago

PAPER III

EACH community has a problem of its own when it approaches the subject of a community hospital, and before any material move is made, excepting the collection of funds and the organization of a temporary board, something of a survey of the community ought to be made to determine the size and character and limitations of the hospital, not only in the first unit to be built, but through a period far into the future. And this survey is practically no different from a survey of that same community that might be made by a business man who was thinking of erecting a store or engaging in any other commercial enterprise. A merchant, thinking about settling there, would want to use his very best judgment as to the future of the town and the surrounding country. He would want to make some calculations as to the character of the future population as well as the present in so far as its spending capacity was concerned. In other words, a store that he would think about opening in a community that was to be made up of the working classes would be far different from that in a summer resort community made up of well-to-do people on an outing, or a suburban city whose population was largely made up of wealthy people who could afford to live out of the nearby metropolis. In the one place he would think about carrying a stock that would be popular with the working classes, and in the other cases he would think about catering to people who had money to spend for fads and fancies.

In this sort of survey, then, we ought to draw out something of the future of the town, and whether it is likely to grow, and in what directions, not only geographically, but socially and financially. If we have a town that we think has reached its limitations of growth and is to go along in a humdrum sort of way at about the size it now is, then we would think about building a hospital all at once to meet the needs of that small town; but if our survey into the future impresses us with the notion that the town is to grow rapidly, then we should plan for the first unit of a hospital that can be added to from time to time without disturbing the homogeneity and workableness of the institution from the standpoint of economy and efficiency.

Another valuable point in this survey is to determine the probability of our hospital becoming popular outside the narrow limits of the town, and receiving the patronage of the surrounding country; and this part of the survey is really an estimate of the medical profession in the town. If there are wide-awake, well-educated, active, and aggressive medical men in the community—men who would, if they had an opportunity, grow by study and work—then, it seems, we should have an asset, in sizing up our hospital situation, that ought to be taken into account; because there are very many cases of disease that cannot be considered emergency, and such cases could be taken to a distant city and cared for by skilled physicians. If our own physicians seem to promise, by their enterprising character, that they can attract this class of patients from the surrounding country, then, in determining the size and character of the hospital, we must take this sort of service into account and provide facilities for these men.

The distance to other hospitals in the surrounding country is an important factor—the distance to the nearest metropolis and the character of the transportation facilities to such distant hospitals. The habit of the people of leaning on these other cities and their hospitals is important.

But, over and above all this, the community spirit of the people is to be taken into account. If there is a disposition on the part of the citizens to look elsewhere for whatever they need, if they have no community pride, and if their residence is an enforced one, so to speak, for financial or business reasons, with their minds ever turning to the day in the future when they may move away, that must be taken into account, because in such a community the people will patronize their home hospital only when they are obliged to, and will go elsewhere when they can. A town of a thousand people made up of citizens who have civic pride is worth more as a hospital asset than a town of ten times the number that is made up of people who have no ties in common and no community interests.

Judging, therefore, somewhat after these formulas as to the likelihood of the future growth of the community, and therefore the future prosperity of the community hospital, we will arrive

at the size of the institution we want to build, gauged, also, of course, by the amount of money available for the purpose.

The next thing to determine is the class of patients we expect to take care of, and it goes without saying that in such a hospital as we are thinking about all the sick and hurt of the community must be taken care of, whether the patient be white or black, adult or child, male or female, and no matter what the disease may be—one of the exanthemata, tuberculosis, child-bed fever, erysipelas, or the diseases that come inside the regular services of medicine, surgery, obstetrics, and the specialties, such as ear, nose and throat, mental diseases, or what not. This means that the hospital must be intensely flexible, and must be able to take care at any time of any kind of case that offers itself. But there are some rather fundamental principles and figures that we have to think about in making up a schedule of the percentage of beds for the various classes of patients; for instance, more men go to the hospital when they are sick than women or children, because it is difficult for the mother of the family to take care of her household duties and the children and at the same time nurse the husband, and a grown man is generally too heavy for a lone woman to handle. Moreover, the household is a little less disturbed by the absence of the man during a period of illness than in the case of the wife and mother. The wife and mother puts off going to a hospital until the last moment, and generally will consent to go only under the greatest pressure of the medical attendant and when told that it is absolutely necessary. That spirit is changing somewhat, but it is still there. Women allow their children to go to the hospital with great reluctance; they have a notion that it is almost abandonment for them to send a sick child away. This idea, too, is passing, but it is there, and in a country town or rural community it is far easier to take care of a sick child in the home than in a tenement district of a metropolis, because there are kind neighbors in the country and in the country town, and because there is plenty of fresh air and sunshine, and at least for sickness there is fresh milk, fresh eggs, and whatever the sick child may need, and the neighbors all flock in to help, so that country doctors are very much less likely to order a sick country child into the hospital than is the case in the tenement district of a large city.

Medical cases can be taken care of in the home better than surgical cases because less technical knowledge is needed, and the mother or wife can usually nurse a sick man where she would not be able to make anything of a surgical dressing; and the same is true, of course, with women and children who need surgical attention. In a good many hospitals more than half the cases are surgery—for this reason and even in a country hospital it seems that nearly half the beds will usually be occupied by surgical cases.

There ought to be a few obstetrical beds, and, if there is a good obstetrician or a physician in whom the women have confidence in that direction, and if the new hospital shall provide correct methods for the care of maternity women, it is very likely that this service will grow rapidly; in some communities it is almost the habit of women to go to the hospital at their lying-in time. This means a labor room, at least one private room for the new mother to lie in quiet for the first twenty-four or forty-eight hours after the birth of her baby, and it means two or three beds in a ward for convalescent maternity cases.

The rest of the hospital should be so constructed architecturally that most of the beds can be separated from all other patients, even though this separation shall involve the making of very small rooms. Certain eye cases need to be in a dark place, and will not bear the light of the medical or surgical ward; choreas in children need to be isolated from the other children. This isolation can be by high screens if necessary, but at least some provision must be made for it. There should be one or two beds so arranged that mental cases can be temporarily cared for until they can be properly sent to institutions specially designed for them. Any private room whose windows can be barred and doors locked will do for these cases, and this same room will do very nicely to take care of an occasional tuberculosis until some other provision can be made for it. The acute infections, especially the communicable infections, constitute a problem of their own, but, if it is intended that the administration of the new hospital shall be up to the modern mark, this problem will not be difficult of solution. In a large hospital where there are many communicable diseases, the problem of isolation is a difficult one because of the great amount of time involved and the technic necessary, but in a small country hospital that is not likely to have to entertain many of these communicable infections, almost any room will do for them, providing, of course, attention is strictly paid in the administration to the principles of asepsis; but it is far better to have one or two rooms capable of pretty strict physical isolation, and, if these rooms have an opening to the outside in addition to the one on the common corridor, it will not be difficult to care for even smallpox or diphtheria in them.

Let us take, for instance, a 25-bed hospital and

see what we can do about these various services. In the average American rural community with a hospital in its midst, in a town of, say, 3,000 people, it would seem that there ought to be one male surgical ward of, say, four beds and a smaller female surgical ward to take care of, say, two patients. There ought to be two medical wards of approximately the same size, an obstetrical ward of, say, three beds, a children's ward of, say, three beds, and, say, seven private rooms, some of these at least arranged so that they can be pretty well cut off from the rest of the house.

In addition to these rooms for patients, there must be the so-called service rooms, and the number of these and their size will depend a good deal on whether the hospital is one story or two; in the latter case it will be necessary to duplicate somewhat. For instance, if the main kitchen is on the first floor and part of the patients are on the first floor, the main kitchen will probably answer for a diet kitchen, but there should be a small service kitchen upstairs. There will have to be small utility rooms, one on each floor, in which the equipment would be hot and cold water, a slop sink, an instrument sterilizer, and a shelf for bed pans, urinals, and the rubber goods. A general linen closet would be necessary on the first floor and a smaller one upstairs. The medicines can be distributed from the drug room on the main floor, and this need not be a large room. There should be somewhere an x-ray room of pretty large size because, even though there is no money for an x-ray plant at the present moment, the money will come soon from some unexpected source. There will have to be an office somewhere near the main entrance of the hospital, and a room for the doctors where they can deposit their outer garments, use the telephone, and have consultations. There will need to be a waiting room, and this ought to be somewhere near the front entrance.

There must be a kitchen, with store room, of course, and a dining room. If there can be two dining rooms, one for officers and the nurses and one for the downstairs help, it will be all the better. These dining rooms need not be large, but they ought to be convenient to the kitchen. There should be one room set apart for apparatus and appliances of various sorts—splints, a stretcher, a wheel chair or two, back rests and head rests, and such devices. Then, if possible, there should be another room for surgical supplies, including instruments, dressings, and the stores of gloves, rubber goods, catgut, syringes, and the like. Some of these rooms will do very nicely on the basement floor, provided there can be areaways on the outside, so that large windows can be had. The kitchen, the dining rooms, the x-ray room, the drug room, and the kitchen store room will do well on the basement floor.

Then there is the surgical operating department, and no pressure for space and no attempt to economize financially should interfere with the correct, however modest, arrangement of the operating department. There need be only one operating room, but there should also be a dressing room somewhere in which minor surgery can be done and in which dressings can be applied, and which can be used, in an emergency, for more serious surgery. Some small hospitals think it is quite sufficient if they have an operating room without any auxiliaries, but this is not enough; the nurses and doctors may scrub up together if economy of space presses, and it is possible to keep the instruments, surgical dressings, anesthetic apparatus, etc., in this room, although it is not advisable to do so. The instrument case ought, in reality, to be in a room without flowing water, because in no other way can they be kept dry and free from rust. There must be some place for making up the drum materials, cleaning the gloves, and preparing the sponges. There should be a small anesthetic room, and this room should have running hot and cold water, and be equipped with a cabinet containing the anesthetic material—ether, chloroform, the masks, etc.—and at the bottom of this cabinet the nitrous oxid and oxygen tanks can be kept. In this room the patient is prepared, shaved, scrubbed, and the field painted; there is a good deal of psychology in this room, because the severity of the operating room can be overcome by having the patient introduced, while awake, to the anesthetic room only, where he or she will see none of the "awful instruments" of surgery.

We need not go into lighting and heating, and ventilation and vacuum cleaning, because these things do not differ in a small hospital from like equipment in a large institution—at least the principles underlying their installations are the same; but there is something to be said about the power plant for a small hospital. It will hardly pay to install a complete power plant in a community hospital of the size and limitations we are thinking about, but there must be a hot water or steam heating system, and this means boilers, preferably two small ones rather than one large one, because occasionally a boiler will get out of commission and it is well to have a substitute. There can also be operated in this plant a small high-pressure boiler that will take care of the sterilization for the hospital, the coffee and tea urns, and the vegetable cookers. If we attempt to furnish our own lights from such a plant as

this, we at once embark on a much more complicated enterprise, and it would seem that the best plan is to buy lighting for a hospital of this size from the public service corporation.

We can conceive a situation in which it would be advisable to have in connection with such a power plant a small ice-making machine that would furnish refrigeration for the kitchen refrigerator and for perhaps one other refrigerator upstairs. It is possible now to buy ice machines of very small units, economical in practice, simple to operate, and profitable in their results—and certainly conducive to comfort and convenience.

Then there is the laundry to think about. The laundry for a 25-bed hospital need not be large. It ought to be prepared to launder at least 500 pieces per day, and it ought to be equipped up to this amount; if possible, the space allotted to the laundry should be much more than necessary for this equipment in order that additional machines may be added with the growth of the institution.

In this discussion we have been thinking about a completed hospital for 25 beds. If it has been decided that the prospective growth of the town will warrant additions and expansion presently, then the architecture of the institution must be predicated on that fact, and consideration must be given to service accommodations for a much larger institution, but it will not be necessary to waste space. We can, in the first unit, so build the hospital that some areas eventually intended for administration purposes can be used to accommodate patients' beds, the intention being to make slight alterations in these areas when additional building enterprises are under way, and these spaces may then be used for administration.

Each community can take its own problem separately, and from the above suggestions easily figure out the number of cubic feet in the building that it will need, always presupposing that beds should occupy 6-foot centers; in other words, the bed is 3 feet wide, and there should be at least 3 feet between the beds and 3 feet between the end beds and the wall, and there should be at least 800 cubic feet of space in each room for each bed. In private rooms, especially if they are not very well ventilated, there should be more air space than this—1,000 or 1,200 feet.

CANNED VEGETABLES—FOOD VALUE AND TRADE METHODS[1]

Methods of Canning—Sizes of Cans—Their Contents in Nutrition—Consumers Are Warned Against Trusting to Appearances Alone—Names of Manufacturers Mean Much

By JOHN PHILLIPS STREET, Connecticut Agricultural Experiment Station, New Haven, Conn.

THE development of the canning industry marks an important step in the conservation of our food resources. While most of us prefer the fresh vegetables to even the finest canned product, these fresh vegetables are not obtainable at all times of the year even to the possessor of a plethoric purse. In times of abundance the canner packs his product, and thus saves from waste tons of useful food products which cater to our wants in the cold, unproductive winter period, and thus supplies wholesome, succulent food which would otherwise be denied us.

The progress of the industry was slow and marked with many failures in its earlier years. The causes of the decomposition of food were but poorly understood, and methods for preventing this spoilage were inadequate and not at all times successful. In the earlier days of the canning industry, bottles and earthenware jars were commonly employed. These containers were unsatisfactory both from their relative costliness and from the ease with which they were broken during transportation or sale. Accordingly the use of tin for this purpose by Durand in 1810 made a decided forward step. But here again expense was an important factor, as the first tin cans were made entirely by hand, the only tools being a pair of scissors and a soldering iron. One hundred cans a day were deemed a large daily output for a single workman. Later the stamped can with extension edges was introduced, with the subsequent improvement of the pressed top. Still later inside soldering was superseded by lock seams and outside soldering, and even this improvement gave way to the can with the open top, the so-called sanitary can, in which the sealing is done by double seaming on the tops, no solder being used except in the side seam. The objections to acid and solder were thus largely overcome. The most modern improvement in the tin can is the enameling or lacquering of the inside with various coatings. This process has not yet been worked out to complete perfection in all of its details, but it offers even in its present stage great advantages with certain fruits and vegetables which tend to attack the tin coating and thus cause a loss in

[1]Next month Mr. Street's paper will be on the subject of Canned Fruits, one of the most important food problems in the hospital.

flavor, quality, and appearance, besides forming objectionable tin salts. The lacquered can finds its most advantageous use with products like raspberries, cherries, plums, beets, pumpkin, and hominy. Its use is not indicated for such vegetables as corn, peas, beans, and tomatoes, whose juices have but little action on the tin.

The meaning of can sizes has often been a source of confusion to the consumer. In the past, when he purchased a can of peas or corn marked "2," unless he were particularly intelligent, he believed he was getting two pounds of the vegetable, whereas in fact only 20 to 22 ounces were received. To the trade, Nos. 1, 2, 2½, or 3 refer to cans of definite measurements, and are standardized within quite narrow limits. The net weight requirement of national and state laws will do much to remove any misunderstanding, provided, of course, that the consumer will take the pains to read the label. The consumer, however, must clearly understand the limitations of the information thus afforded. Most canned vegetables and fruits are and must be packed with more or less water, which is either natural to the product or is directly added. The weight of a can of vegetables, therefore, gives no information as to the quality of the vegetables or the relative amounts of solid and liquid contained in the can. One can may show a greater net weight than another, and yet contain actually less of the vegetable or fruit in question. The statement of net weight conveys no further information than the amount of material, both solid and liquid, in the can. The writer has found, for instance, in the case of peas, two brands which had about the same net weight, yet one supplied 16 ounces of drained peas and the other only 10.9 ounces, or, in other words, a little more than one-fourth of the contents of one can was water and almost half the contents of the other.

The label of the can of vegetables is not always as informing as it should be. The great difficulty lies in the confusion among the canners themselves as to the significance of the terms of quality they employ. Such terms as "extra select," "extra choice," "extra fancy," "select," "choice," "fancy," "extra standard," and "standard" are commonly found on the can label. It may be quite clear to any one manufacturer what these terms mean as applied to his particular product, but the "select" or "fancy" of one canner may be quite a different grade from that of one of his competitors. Furthermore, his grades may vary with the season, as drought, excessive rain, or heat affect the quality of the vegetable. Under present conditions the only safe course for the consumer to take is to buy his canned vegetables strictly by brand name. A little experience will teach him which manufacturer's product best suits his wants and his taste, and then, if he follows the rational practice of ordering a can of "Smith's Peas" or "Jones' Corn" instead of a "can of peas" or a "can of corn," satisfactory results will generally follow.

In using canned vegetables, their relatively low food value must not be overlooked. They are not a form of concentrated food, as water makes up from 75 to 95 percent of their weight, and in the more watery products there is not room for any considerable amount of nutriment. The table below shows the average composition of the principal varieties of canned vegetables. It will be seen that baked beans, lima beans, kidney beans, corn, succotash, and sweet potatoes yield from 77 to 177 calories per 100 grams of material, while asparagus, artichokes, string beans, brussels sprouts, okra, and tomatoes yield only from 18 to 24 calories. The latter cannot be recommended for the nutriment they contain, but they do have value from their succulence, their flavor, and the organic acids and mineral salts they contain. Tomatoes, especially, while being quite low in nutriment value, have a distinct value for flavoring and garnishing purposes in the preparation of a long list of attractive and appetizing dishes.

CANNED VEGETABLES[1]

Vegetable	Water	Ash	Protein (N x 6.25)	Fiber	Nitrogen-free extract	Fat	Calories per 100 grams
Artichokes	92.5	1.7	0.8	0.6	4.4	...	23
Asparagus	94.4	1.2	1.5	0.5	2.3	0.1	18
Beans, baked	68.9	2.1	6.9	2.5	17.1	2.5	129
Beans, string	93.7	1.3	1.1	0.5	3.3	0.1	21
Beans, lima	79.5	1.6	4.6	1.2	13.4	0.3	77
Beans, kidney	72.7	1.6	7.0	1.2	17.3	0.2	104
Brussels sprouts	93.7	1.3	1.5	0.5	2.9	0.1	21
Corn	76.1	0.9	2.8	0.8	18.2	1.2	98
Macedonie (mixed vegetables)	93.1	1.0	1.4	0.6	3.9	...	24
Okra	94.4	1.2	0.7	0.7	2.9	0.1	18
Peas	85.3	1.1	3.6	1.2	8.6	0.2	55
Potatoes, sweet	52.2	1.1	1.9	0.8	40.6	0.4	177
Pumpkin	91.6	0.7	0.8	1.1	5.6	0.2	32
Squash	87.6	0.5	0.9	0.7	9.8	0.5	50
Succotash	75.9	0.9	3.6	0.9	17.7	1.0	98
Tomatoes	94.0	0.6	1.2	0.5	3.5	0.2	24

[1]Atwater and Bryant—Chemical Composition of American Food Materials, 1899, p. 69.

When everything is considered, the cost of canned vegetables is, as a rule, not excessive when compared with that of the fresh product. In many instances the vegetable packed is much fresher than the "fresh" vegetable obtainable in season in most of our large cities. Corn and peas, for instance, deteriorate in quality very quickly after picking, and here the canner has the great advantage of being able to pack promptly crops especially grown for him, and thus retain in great measure the flavor and quality of the

fresh vegetable. Many brands of canned vegetables, however, are, of course, relatively expensive, but it is not always so much the fault of the canner as of the foolish and overexacting purchaser. If the consumer will insist that every pea and bean and every grain of corn shall be of approximately the same size, he must expect to pay the canner an increased price for the necessary selection and separation of these products. On the other hand, if he is willing to make some sacrifice of appearance and will accept the "field run," which lacks the uniformity of the fancy article, he will secure quite as much nutriment in just as palatable form, and certainly at a much lower price. The consumer who insists on "petits pois" ("little peas") naturally must pay a higher price for them, for less than 5 percent of peas run that size, and at the same time he is buying peas which lack the flavor and nutriment of the larger peas, which cost only about one-third as much.

In the purchase of canned peas the consumer should learn the significance of the terms indicating trade sizes as applied to the vegetable itself. These are petits pois, extra sifted, sifted, early June, marrowfat, and telephone, and have no reference to the variety of pea used or to the time of picking, but exclusively to the size of the peas, ranging from less than 9/32 of an inch in the case of petits pois to over 13/32 of an inch in the case of telephones. As already stated, the smaller and more tender peas are much more expensive than the larger grades, such as marrowfats and telephones, and contain much less nutriment. For instance, in an examination of a large number of samples made by the writer it was shown that a can of marrowfat peas supplies 385 calories and a can of petits pois only 157; furthermore, the former shows an average cost of 11 cents per can, the latter 19 cents per can, making the cost per 100 calories in marrowfat peas 2.9 cents, while in petits pois it is 12.1 cents, or over four times as much.

Similarly in 1912 the writer showed the great variations in the cost of canned tomatoes. These are filled into the cans either by hand or by machine. The cans filled full of whole tomatoes by hand are known as "hand packed" or "solid packed," as distinguished from those filled by machine, or filled with a mixture of whole tomatoes and added juice. In machine-packed tomatoes the fruit is naturally more or less broken, thus affecting the appearance, but not the quality, of the product. It was found that in No. 3 cans, the standard size for tomatoes, the pulp ranged from 264 to 541 grams, the juice from 408 to 682 grams, and the percent of juice from 43 to 72. Of these samples 4 contained from 43 to 50 percent of juice, 15 from 52 to 60, 6 from 61 to 64, and 2 over 70 percent. The cost per can ranged from 9 to 15 cents, the cost per pound of dry matter from 75 cents to $1.86, and the cost per pound of tomatoes of average water content from 4.8 to 11.9 cents. In two samples, packed in glass for fancy trade, the cost per pound of dry matter was $2.45 and $3.61. It is apparent from the above that in many cases the consumer pays extremely high prices for supposed high quality, which all too often is a matter of mere appearance and not of nutriment supplied.

The usefulness of canned vegetables to the American public is unquestioned. It is equally evident, however, that the consumer, intent on purchasing palatable nutriment at the lowest cost, should not be led astray by assumed standards of quality based more on the appearance of the food than on its nutriment value. The composition of canned vegetables, even of the same manufacture, varies from year to year, and tables of analyses are at best but an imperfect guide. The consumer should appreciate the importance of brand names with this class of products, and, as said before, when he finds a manufacturer supplying a brand that meets his wants, he should give his allegiance to that brand until it is found wanting, which in the case of the better class of manufacturers will be rare indeed.

In a French War Hospital

The following vivid description of the scene at a French hospital where wounded soldiers were being received is contained in an article by Henry Sheahan in the August *Atlantic:*

"The chateau had been a hospital since the beginning of the war. A heavy smell of ether and iodoform lay about it, mixed with the smell of the war; for the war has an unmistakable odor of its own—a compounded odor of humanity, wet cloth, horses, leather, mud, smoke, and chemicals; a smell that clings to everything military, fills the troop trains and encampments, and saturates one's own clothing. This effluvia of an army, mixed with the sharper reek of anesthetics, was the atmosphere of the hospital. The great rush of wounded had begun. Every few minutes the ambulance slopped down a miry byway, and turned in the gates; tired, putty-faced hospital attendants took out the stretchers and the nouveaux clients; mussy bundles of blue rags and bloody blankets turned into human beings; an overworked, nervous medicine chef shouted contradictory orders at the brancardiers, and passed into real crises of hysterical rage. 'Avancez!' he would scream at the bewildered chauffeurs of the ambulances; and an instant later, 'Reculez! Reculez!'

"The wounded in the stretchers, strewn along the edges of the driveway, raised patient, tired eyes at his snarling. Another doctor, a little bearded man wearing a white apron and the red velvet kepi of an army physician, questioned each batch of new arrivals. Deep lines of fatigue had traced themselves under his kindly eyes; his thin face had a dreadful color. Some of the wounded had turned their eyes from the sun; others, too weak to move, lay stonily blinking. Almost expressionless, silent, they resigned themselves to the attendants as if these men were the deaf ministers of some inexorable power."

St. Francis Hospital, San Francisco, is being enlarged.

THE VALUE OF EMPLOYEES' MEDICAL AND SOCIAL SERVICE DEPARTMENTS

How the Firm of Ed. V. Price & Co. Has Improved the Working Conditions of Its Employees—Medical Service and Social Advantages Important Factors in Maintaining Efficiency—Home Conditions Also Receive Attention—Provisions for the Care of the Sick

By MISS AGNES P. McCLEERY, Chicago

THE movement toward the development of the medical and advisory departments in our large mercantile houses is one of the most significant advances in preventive medicine. The effort on the part of employers to better, both socially and physically, the condition of their employees is in part an altruistic movement, although the majority of firms disclaim any such motive and simply hold that this work is an active and potent instrument in the upbuilding of an efficient and healthy working force.

During the past few years a number of Chicago firms have organized medical and social service departments, after which other firms have patterned their medical departments. After all, the problem is a varied one, each line of business having its particular needs and each employing a different class of employees, so that at best each line of business is studying its own situation carefully, and working out slowly and systematically a helpful line of medical and hygienic supervision.

The firm of Ed. V. Price & Co., Chicago, was the first of the men's clothing manufacturers to introduce a systematic medical examination of its employees.

This company, employing 1,800 foreign- and American-born men and women, developed rapidly from the old system of having scattered work shops in various parts of the city to a large central plant, consisting of two large modern fireproof buildings, models of sanitation in every respect. One building has been so constructed that each of the eight floors is supplied with an abundance of light from three sides, and the workers are so placed that their work is executed without eye strain. The ventilation of each floor is constantly supervised and under strict regulations.

Drinking fountains are used throughout the house. Sanitary soap and individual towels are furnished to all employees. The work rooms are swept every night and scrubbed once a week.

The working day for employees is a very reasonable one, forty-eight hours constituting a full week's work. Time and one-half is paid for all overtime work and full pay for seven holidays during the year. The firm's policy is to provide not only a liberal wage, but recognition and advancement of the efficient, skillful, and faithful employee.

Several years ago this firm employed a nongraduate nurse to care for those who were taken suddenly ill or to give first aid in minor injuries. With the organization of its medical department a graduate nurse has been employed, one who has been trained both in medical and sociological fields. The firm believes that the efficiency of the employee is not only lessened by his own illness, but it has found that, particularly among the women employees, sickness in the home was a frequent cause of absence from work or inefficient work when present. The firm has, therefore, arranged to supply free of charge in cases of sickness the counsel of a consulting specialist or the services of a visiting nurse to cooperate with the family physician in the home.

The company, through its medical and advisory department, endeavors to be helpful along such lines as the following:

- Light and ventilation of work rooms.
- Inspection of lavatories, toilets, etc.
- Dining rooms.
- Lunches sold at cost.
- Malted milk during working hours.
- Rest rooms.
- Branch library.
- Referring patients to specialists (firm's expense).
- Visiting nurse service (firm's expense).
- First aid.
- Emergency hospital rooms.
- Inspection of new employees.
- Nurse's office for consultation.
- Annual employees' picnic.
- Vacation camp during summer months.
- Distribution of health bulletins through pay envelopes.
- Health lectures after working hours during dull season.
- Educational motion pictures.

The office of the trained nurse is on the dining room floor, conveniently located, so that employees may confer with her during the lunch period. A cut finger is dressed, an infection is sent to a surgeon, the pale and anemic are sent to a specialist and their treatment arranged as he directs. Often a simple, constructive tonic treatment is all that is necessary, or, in more urgent conditions, a stay at the fresh air sanatorium is advised. There is also the surgical emergency service, and the hospital may be the patient's destination, followed by a carefully advised convalescence in one of the rest homes near the city.

Aside from the medical work which the nurse is performing for the employees of the firm, and cooperating at all times with their physicians, an

Fig. 1. Ed. V. Price & Co., Chicago. One of two rest rooms.

idea of the extent of her advisory efforts may be gained from the fact that during a period of one year she gave over 2,000 consultations to employees pertaining to their own health or to that of some member of their family. In this manner some incipient cases of tuberculosis have been discovered and brought under medical care, in some instances being sent to a sanatorium, or, if too far advanced, have been placed under proper medical supervision in their homes. A review of the figures in the yearly reports of this department shows at a glance the great value of the work toward health saving and efficiency conservation. Important have been the cultural observation of infected throats and the early recognition of scarlet fever, diphtheria, and acute cases of appendicitis. Some idea of the extent of the work of this department may be gained from the following statistics for 1915:

Office consultations	2,933
Dressings	741
Visiting nurse visits	387
Referred to specialists	189
Vacations arranged	106
Health lectures given	35
Referred for operations	12
Fitted for defective vision	23

LUNCH ROOMS

In each of the large dining rooms a cafeteria lunch service is in operation, where carefully prepared food of the best quality is sold at cost. For 2 cents a portion the following can be purchased: soup, sandwiches, baked beans, ice cream, pie, cake, apples, oranges, coffee, tea, malted milk.

The dining rooms have been made attractive with canary birds and table and wall decorations. In the summer flower boxes are placed in the windows and hanging baskets suspended from the ceilings. On October 1 the leaves and flowers are changed so as to be in keeping with the fall season.

The serving of malted milk during working hours twice a day to persons below normal physically has been a very satisfactory undertaking. Employees who are underweight or in need of building up their general health are given the opportunity of this arrangement.

RECREATION FOR EMPLOYEES

Adjacent to each dining room is a cozy rest room for women, where comfortable rocking chairs, settees, a modern phonograph, and reading tables, with the leading weekly and monthly publication, serve their purpose admirably.

A well-organized baseball league selected from the different departments of the two plants has been uniformed and equipped by the firm, and on Saturday afternoons during the summer months some very interesting exhibitions of the national game take place.

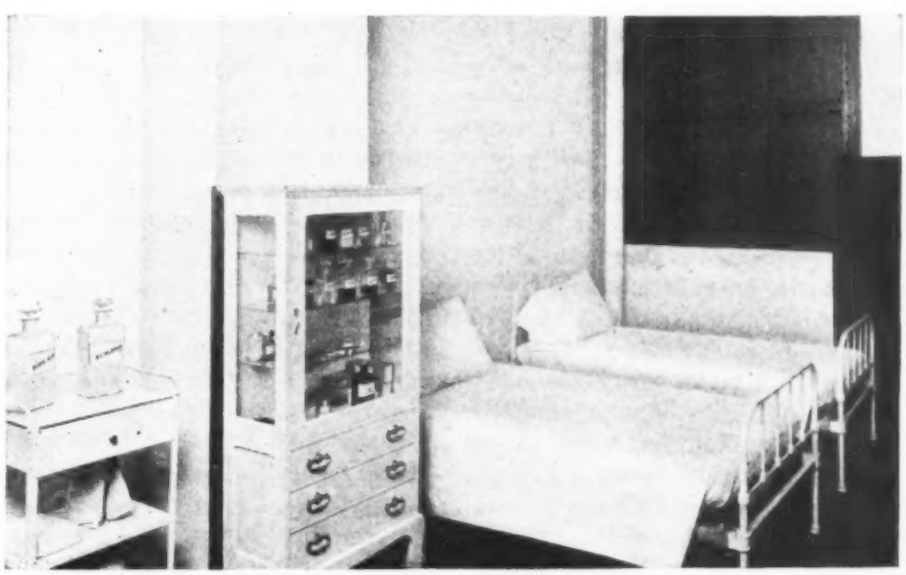
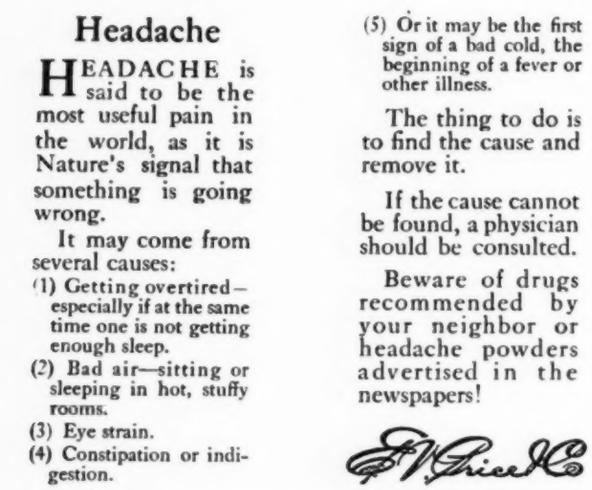


Fig. 2. Ed. V. Price & Co., Chicago. Room in emergency hospital.

Every summer the company gives a picnic to the employees and their families, after which a souvenir book of photographs taken at the picnic is compiled and presented to each employee. Small children are made a special feature at these



Headache

HEADACHE is said to be the most useful pain in the world, as it is Nature's signal that something is going wrong.

It may come from several causes:

(1) Getting overtired—especially if at the same time one is not getting enough sleep.
(2) Bad air—sitting or sleeping in hot, stuffy rooms.
(3) Eye strain.
(4) Constipation or indigestion.
(5) Or it may be the first sign of a bad cold, the beginning of a fever or other illness.

The thing to do is to find the cause and remove it.

If the cause cannot be found, a physician should be consulted.

Beware of drugs recommended by your neighbor or headache powders advertised in the newspapers!

Ed. V. Price & Co.

Fig. 3. Ed. V. Price & Co., Chicago. Health bulletin, size 5½ by 4½ inches, containing a few simple facts regarding health or disease, distributed once a month with the pay envelopes.

picnics in parades, games, contests, etc. The entire expense of the picnic, including transportation, is borne by the firm.

During July and August a hundred women, as guests of the senior member of the firm, are given a week's outing at Lake Bluff, Ill., in a cottage built on the grounds of the Arden Shore Association.

CIRCULATING LIBRARY

Employees are given the advantages of the Chicago Public Library through a branch station in the house, where any book in the library may be secured. During the first thirty months after the opening of this station 8,864 books were circulated, 589 of which were requests from the employees for special books from the main library.

Back of these special aims toward social and physical improvement is a desire on the part of Ed. V. Price & Co. to have each employee increase his own earning power through a maximum degree of personal efficiency, and it is readily seen that nothing else is so conducive to better results than ideal surroundings and wholesome working conditions. These efforts cannot be construed as wholly philanthropical, but as partly a business proposition whereby each employee receives the fruit of his labors and is enabled to advance to the greatest possible extent through having no conditions to impede him, but conditions to help him.

Taken altogether, a most desirable degree of cooperation is manifest, and the employees are, in a sense, one large happy family, working together in complete harmony and with an appreciation of their employers' object to increase their efficiency. The value of this condition is apparent in their own individual and collective success.

THE WARD PATIENT AT SLOANE HOSPITAL FOR WOMEN, NEW YORK CITY

No Visiting Allowed, and Rigid Technic, Evolved After Years of Study, Is Practiced—Some of the Details in the Preparation and Labor

By MARY E. HUTCHISON, Principal of Training School

AS many patients are very nervous and excited when they are admitted, one of the first duties of a nurse, in the cases of those thus affected, is to reassure them and quiet them as much as possible in order that they will have more strength to properly use their labor pains when they occur.

On admission a specimen of the urine must be obtained, one part of the urine being examined at once by the examining physician to ascertain if there is albumen present, and the other part is sent to the laboratory for more complete examination. The patient is then prepared for the vaginal examination, being placed on the examining table in the lithotomy position. The pudenda are well scrubbed with sterile green soap and then shaved, a safety razor being the most satisfactory instrument to use. After the area has been cleanly shaved, it is washed off with warm sterile water, when the patient is ready for vaginal examination by the physician, who was notified when the patient was admitted. The physician informs the nurse in what stage of labor the patient is and whether the membranes are ruptured. If she is in the early first stage of labor and membranes are not ruptured, she may be given a tub bath, but otherwise must go to bed and be given a thorough sponge bath and have her head shampooed, using 1 ounce of 1:12 ammonia water to a pitcher of warm water, and afterwards the hair is sprayed with a disinfectant.

All patients who are not in the second stage of labor must have the bowels thoroughly emptied by giving soap and water enemas—three if necessary. If labor is long, one enema must be given every twelve hours while patient is in the labor room. The patient's bladder must also be kept

empty, and, if the patient cannot void every four hours, she should be catheterized, a rubber catheter being used.

The nurse in charge of the labor room is responsible for the care of the patient, and must carefully watch her condition, reporting to the head nurse any changes she may observe. She must especially report when the patient has "bearing down" pains, when the membranes are ruptured or any bleeding occurs, and report at once the first appearance of capita. The appearance of meconium during labor should also be reported at once, as it signifies pressure on the child.

The nurse should see that the patient is made comfortable and given light nourishment at intervals, allowing her to rest as much as possible, so that her strength will be saved for the second stage. During the first stage, if membranes are not ruptured, the patient may walk around a little, but must always wear a sterile pad. If the membranes have ruptured, she must not leave the bed, and the vulva is covered with a wet 1-1000 bichlorid towel.

When the patient enters the second stage of labor, a second stage suit is immediately put on, which consists of a short jacket and long stockings, and she is ready to be taken to the operating room at the first sight of capita. Unless the physician has recently examined the patient and informed the nurse that she is fully dilated, the only way the nurse can determine that the patient is in the second stage is by the nature of the "bearing down" pains, which become more intense, and a bulging can be felt at vagina. During the second stage the nurse must attend to the case very carefully, as capita may appear with any pain. When capita is observed, no time is to be lost in notifying the head nurse and having the patient taken into the operating room.

The operating table should always be in readiness, well protected with rubber pads, with a Kelly pad over side, the end falling into a pail on the floor. The cart is also set up for delivery and the reception of the baby and the care of the mother during and after delivery. On the cart are kept a sterile douche can, with a sterile douche tip; a jar of sterile green soap for scrubbing the patient, with a pitcher of sterile water with which to wash off; two basins of ½-percent lysol, with cotton balls in each; two bowls of 1:1,000 bichlorid, with two sterile towels in one and dressing in the other; two basins and two pus basins; two packages of sterile towels, and a cord set, which consists of a pair of scissors, thumb forceps, two cords, and a pledget. There should be provided also two gauze rolls for "blow-outs," a sterile binder for the baby, two small bottles of sterile saline for douches, a jar of sterile albolene, two medicine droppers (one with boric acid solution and the other with 20-percent argyrol), a tape measure, a pelvimeter, and a stethoscope.

A labor slip, which was made out when the patient was admitted, with a record of the patient's name, number of gravida, position of child when pains began and kind of pains, time of ruptured membranes, and commencement of second stage of labor, with all examinations made by the physician and treatments and medications given, is taken into the operating room with the patient, and an additional record of the time of birth of child, weight, expression of the placenta, and anesthesia given is kept during delivery.

When the physician is scrubbed up and ready, the patient is placed in position on the table, with knees up, the pudenda are scrubbed with green soap and washed off with sterile water, and draped with sterile towels. The nurse's duties now are to hand the physician what he may need off the cart and give him any assistance he may require. After the mouth of the baby appears, which is the birth hour of the baby, the nurse follows down the fundus with her hand.

In a normal case, where the mother is in good condition, the first care is given to the baby after delivery. If the child does not breathe properly, the physician uses artificial respiration, giving even hot and cold baths and using a lungmotor if necessary. After respirations have been established and the baby has given one or two cries, it is placed on a sterile towel at the mother's feet and the cord tied and cut. If more than ordinary measures were used to make the baby cry, the cord should have been clamped and cut and then tied afterward. The baby is now well rubbed with albolene where the binder is to be placed, rubbed off with a sterile towel, and sterile dressing and a nonabsorbent gauze binder is applied. The eyes are washed with boric acid solution and two drops of 20-percent argyrol are dropped into each eye. The head measurements and length of the baby are taken and charted, and the lungs and heart are tested. The baby is wrapped in a sterile weighing blanket and weighed, a tag is pinned on the binder bearing the name, time of birth, and weight, and is then taken to the nursery, where it is well albolened, placed in warm bed, and left six hours before the bath is given.

The physician's attention is now given to the mother. Twenty minutes are allowed to elapse before the placenta is expressed after the birth of the child. During this time the nurse holds the fundus firmly with her right hand, and, if any bleeding begins, the fundus is massaged until the uterus contracts and bleeding stops. When the

placenta is expressed by the physician, he examines it to ascertain if any membrane has been left in the uterus. The patient is now washed off with ½-percent lysol, a wet 1:1,000 bichlorid dressing is applied, and is then transferred to the bed, with the knees kept close together. Ergot (2 drams) is usually given to prevent bleeding.

The nurse holds the fundus for one hour after the birth of the child, and after that time has elapsed she prepares the patient for conveyance to the ward. First the nipples are well cleaned with alcohol and ether, a pledget with albolene is applied to each nipple, and a snug breast binder is applied. The patient is placed on a bed pan, and, if she voids, the amount is charted. She is then washed off with ½-percent lysol solution, two sterile pads are attached (one absorbent and one protective), and a tight many-tailed abdominal binder is applied. After temperature, pulse, and respiration are taken and the patient's hair is combed, she is ready to be taken to the ward.

The first three days the patient is attended with four-hour dressings. These are done at 9, 1, and 5 o'clock, with the same care as was followed in the delivery room, and the amount of each voiding is carefully charted, a postpartum specimen being sent to the laboratory as soon as a clear one can be obtained. The position of the fundus is taken before and after the bladder is emptied, and this is charted, with a description of the lochia discharge. During the first two days only fluids are allowed, but on the morning of the third day the patient is given ½ ounce castor oil in ½ ounce cinnamon water, and a soft solid diet is then given. From the third day there is a standing order for soapsuds enema—once a day if necessary—and from the fourth day on an order for 10 grains cascara three times a day and a regular diet. No raw fruit except oranges is to be given, with plenty of milk and cereals.

The baby is brought in to nurse every six hours the first three days and every three hours thereafter. The nurse attends to the condition of the mother's nipples, and should report any soreness, when the physician will order Peru balsam or witch hazel compresses to be applied after each nursing. The nipples are washed with boric acid before the baby nurses, and after feeding they are washed again with boric acid solution; a sterile pledget with sterile albolene is applied and the breast binder is pinned snugly in place. If the nipples are very sore, the physician may order a breast shield used for nursing, and, if the breasts become hard and painful, a massage and expression may be ordered.

The patient's temperature is taken twice a day unless a subnormal temperature occurs—below 97 degrees—or a higher one than 100 degrees, when a four-hour chart is made out. On the fifth day a bath is given, when a "T" binder replaces the large binder, and by the tenth day the patient is allowed to take her own bath in bed.

Lochia rounds are made by the nurse each morning and the findings charted and the physician on his morning rounds takes the position of the fundus and examines the breasts. On the eighth day, if conditions are favorable, the physician orders the patient in a chair for one hour; on the ninth day, two hours; on the tenth day, four hours; on the eleventh day, eight hours; and on the twelfth day he allows her to have a wrapper and walk around. On the thirteenth day the patient is examined in the "final room" by the physician and the findings charted on the history sheet, and, if conditions are satisfactory and the baby is well, she is allowed to go home that afternoon, but is instructed to come to the clinic if any trouble arises.

No visitors are allowed in the wards unless in case of eclampsia, cesarean operations, or other serious condition of mother or baby.

ICE CREAM MAKING REGULATED

Bacteria, Pasteurization, Labels, Prescribed in New New York Law

An important regulation affecting the manufacture of ice cream has been enacted by the New York Health Department. All manufacturers, whether within the city or outside firms who ship either the ice cream or ingredients, are affected by the following regulations:

1. Can or receptacle to be labeled.—Each can or other receptacle containing ice cream, which is used in the transportation or delivery of ice cream, shall have affixed thereto a label, on which said label the name of the manufacturer and the date and place of manufacture shall be clearly and legibly set forth.

2. Ingredients.—All ingredients used in the manufacture of ice cream, except flavors, fruits, and sweeteners, shall be pasteurized in accordance with the regulations of the Board of Health governing the pasteurization of milk and cream, or subjected to a temperature of 212 degrees Fahrenheit for not less than two minutes.

3. Butter homogenized with milk or skim milk powder to be labeled.—Ice cream manufactured from butter homogenized with milk or skim milk powder in water shall bear a statement on the label that such ice cream has been manufactured from butter homogenized with milk or skim milk powder.

4. Excessive bacterial count.—Ice cream containing an excessive number of bacteria shall not be brought into, or held, kept, or offered for sale in, the city of New York.

5. Ice cream not to be falsely labeled.—Ice cream sold or offered for sale under a designation signifying the grade of milk or cream from which it is manufactured shall not be manufactured from any grade of milk or cream other than that designated.

6. Ice cream to be kept frozen.—Ice cream after being frozen must be kept frozen until dispensed.

THE NEW GENERAL CITY HOSPITAL, AURORA, ILLINOIS

Five-Story Building for Ninety Patients, Costing Twenty-Seven and One-Half Cents Per Cubic Foot, Intended to Meet All Modern Requirements— Each Floor Practically Independent

By NETTIE B. JORDAN, Superintendent, and R. S. SHEPARDSON, Aurora, Ill., Architect

THE Aurora Hospital Association was organized and incorporated in 1886 by a few public-spirited citizens, who at that time built a two-story and basement brick hospital, to which additions and alterations have been made from time to time. The old building was designed and constructed in what was at that time considered by those in charge as good architecture. But things have changed; ideas that were considered good then are now obsolete, and the people have realized for some time that a modern building should be erected to take its place — a building more conveniently arranged and having greater capacity for patients. Aurora has upward of 40,000 people, besides a large territory surrounding it, from which to draw hospital patients.

Fig. 1. Aurora City Hospital. Rear elevation.

Instead of erecting a new building on the site of the old one, it was decided to purchase adjoining property. This plan had two advantages—the hospital work could be continued without interruption, and at some future time the old building could be converted into a home for nurses, who at present are compelled to live in neighboring private residences. A campaign was instituted to raise the necessary funds, and $115,000 was subscribed in amounts ranging from 10 cents to $6,000. There were 5,200 pledges, making an average amount per pledge of $22.11. As this was to be the people's hospital, made possible by everyone interested, subscriptions were welcomed from everyone without regard to religious or fraternal affiliation, or nationality. Many of the rooms were furnished complete by families, individuals, clubs, and societies.

The excavation and foundation to grade were let as a separate contract, and work was started in the fall of 1913, but the general contract was not let until some nine months later, when the work started in earnest, and now the new building is occupied, a period of a little more than two years having passed since the campaign for raising the necessary funds started. The hospital is located in the residence district on high, dry ground, with a gravel subsoil, and is about one mile from the business center. It is a building 50 feet wide at the north and 44 feet wide at the south end, and 125 feet long. The main axis is nearly northwest and southeast, giving ideal orientation.

It is a five-story structure, the ground or first floor being but 3 feet below the finished grade of the lot. On the roof is a solarium and roof garden for convalescents. The materials used in the exterior construction are rough texture brick of brownish red color, with terra cotta and Bedford stone trim. The interior partitions are of hollow tile, plastered, and the floors are of hollow tile and reinforced concrete beams, this construction making a fireproof building. The main entrance to the building is near the north end, and is protected from the weather by a classical portico of Bedford stone in the Doric. The rear entrance is a grade entrance to the stairway going from the basement to the solarium on the roof. Just south of the rear entrance is the

ambulance entrance, which connects with the elevator; by this arrangement a patient may be brought to the building on a stretcher and taken to any part of the building while still on the stretcher.

Each floor is divided into two parts by a corridor running the full length of the building, with

Fig. 2. Aurora City Hospital. Corridor from the rotunda.

rooms for various purposes on either side. The first floor is given to the kitchen, boilers, nurses' dining room, laboratory, x-ray, emergency operating, and detention rooms, store rooms, etc. The second floor contains the office, superintendent's apartments, diet kitchen, duty room, linen room, toilet rooms, and private rooms for patients. The third floor is similar to the first, except that the north end is taken up by wards, pus room, and children's department; this floor will be devoted to the care of women and children. The fourth floor is used exclusively for maternity work, having an operating room, lying-in room, nursery, and rooms for patients. The fifth and top floor contains the two main operating rooms, anesthetizing room, sterilizing room, doctors' scrub room, waiting room, service rooms, and rooms for ward and single patients; this floor is devoted to surgical cases and the men's department. This arrangement makes each floor a complete hospital in itself.

There are eight private single rooms, with private bath attached, twenty-one rooms without bath, four 2-bed wards, two 4-bed wards, three 5-bed wards, a children's ward accommodating eight patients, and a nursery having at present twenty basinets, but with room for ten more babies. This makes a hospital sufficiently large to care for ninety patients of all ages.

DETAILS ABOUT THE NEW BUILDING

The main stairway and wainscoting at the main entrance are of Italian marble. All corridors, diet kitchens, toilets, operating rooms, scrub rooms, waiting rooms, etc., have mosaic tile floors. Down the center of each corridor is a strip of linoleum 3 feet wide, which prevents noise, and also makes it much easier for those constantly walking back and forth through the corridors. All rooms for the sick have linoleum flooring of a blue mottled pattern cemented to the concrete construction. The linoleum of this color does not show dust as easily as a plain color. The windows swing out and turn over, making them easy to wash from the inside, and, when both are open wide, the full size of the window frame is available for ventilation. The toilets, kitchens, and duty rooms have a ventilating system, operated by a fan on the roof, drawing air from the rooms through metal ducts. The doors are of birch mahogany stained and of flush sanitary design, without panels. All wood trim is enameled white, while the walls are enameled an ivory color. The electric fixtures and the bedside tables, etc., are finished in the same tint. The operating rooms have white enameled walls and ceilings above a 6-feet high white glass wainscoting. Where the walls join the floors a sanitary cove is used. Where wall joins wall and walls join ceiling is a

Fig. 3. Aurora City Hospital. Operating room.

cove to make easy cleaning. The lighting of all rooms is by indirect electric fixtures, excepting the operating rooms, which have the Bartlett no-shadow fixtures.

In the boiler room are two cast-iron down-draft boilers, each of a capacity for 5,000 square feet of radiation; a garbage burner and water heater for the hot water supply of the building, and a high-pressure boiler to furnish steam to the sterilizers and for cooking in the kitchen. The heating is a

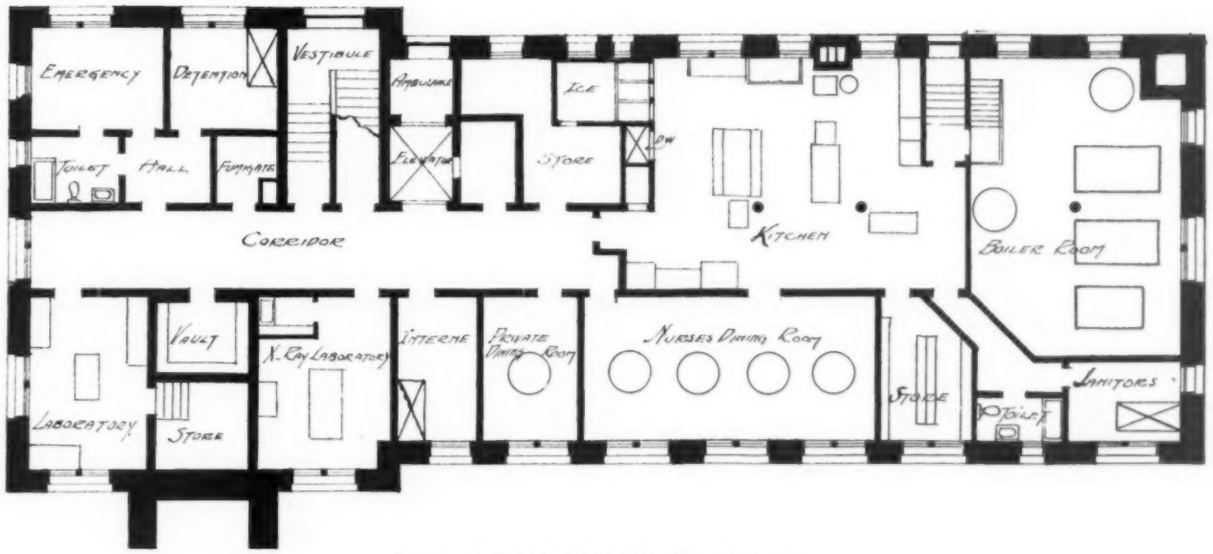


Fig. 4. Aurora City Hospital. First floor plan.

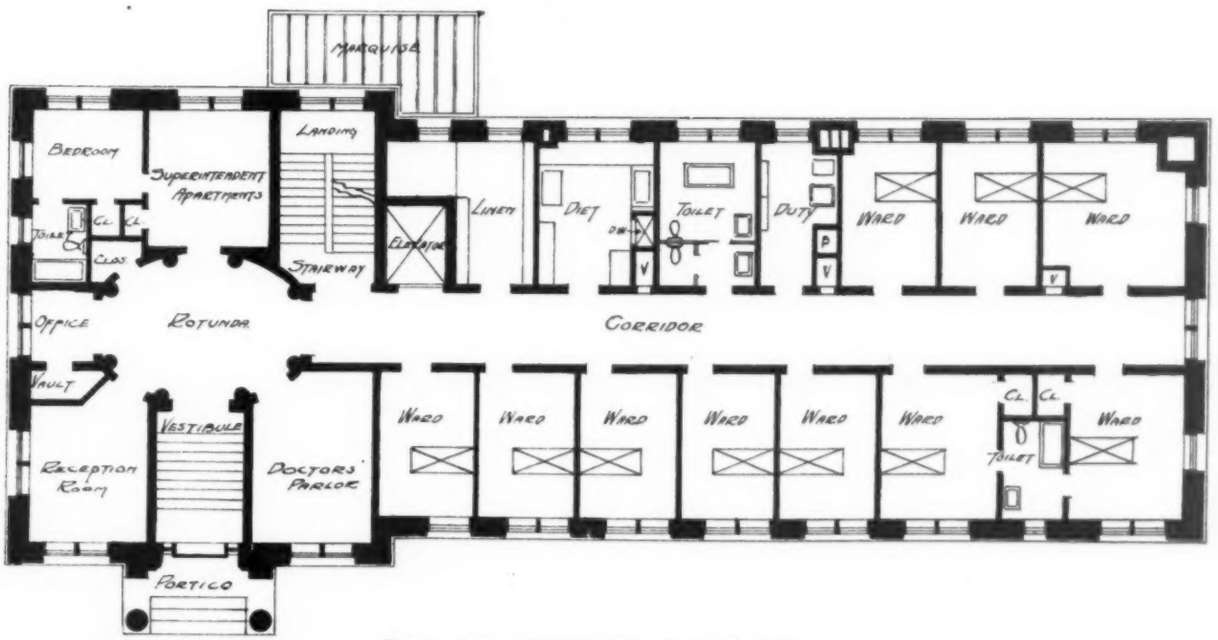


Fig. 5. Aurora City Hospital. Second floor plan.

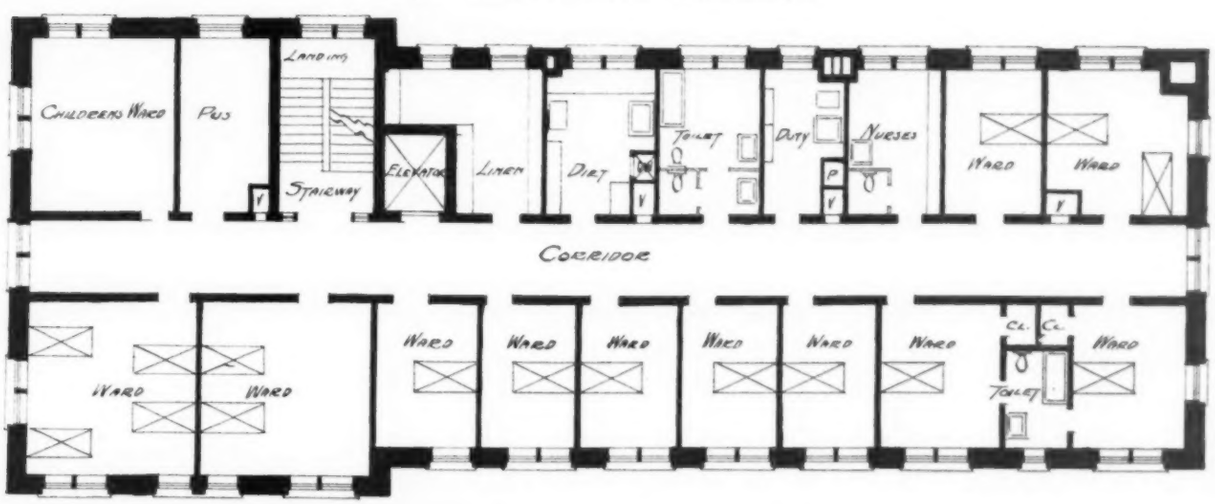


Fig. 6. Aurora City Hospital. Third floor plan.

vapor vacuum system, with radiators suspended on the wall free from the floors. The plumbing fixtures and sterilizers are suspended from the walls as far as possible.

The elevator and dumbwaiter are full size automatic electric machines. Each machine may be summoned or sent to any floor from any floor.

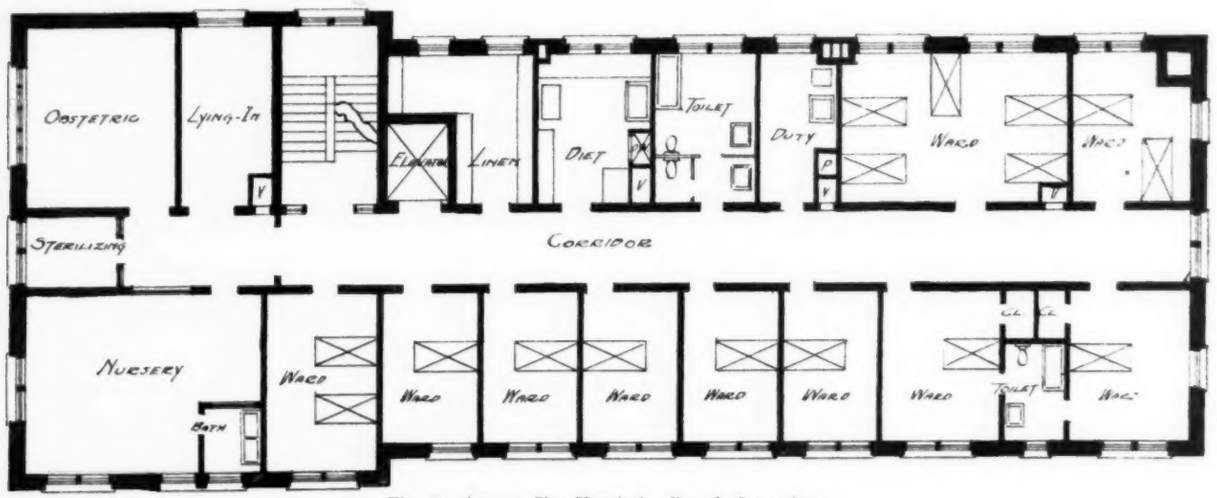


Fig. 7. Aurora City Hospital. Fourth floor plan.

Throughout a special design of steel lockers, cupboards, etc., is used, best fitting the place for its work. The nurses' signal is a silent electric system; when the patient presses a button at his bedside, notice is registered by an electric light at the head of the bed, in the corridor just outside the patient's room, at the floor nurse's desk in the corridor, and at the main office. These signals all remain on until the nurse answering the call releases the switch at the patient's bed. The building is equipped with a twelve-station intercommunicating telephone, the stations being placed at the important places throughout the various floors; also each floor nurse and each private room is connected with long-distance telephone service through the switchboard in the office.

Regarding the furnishings for the new hospital, there is absolute uniformity, and simplicity as well as elegance, in all private rooms; square dressers of various woods, with small tables to match, each having glass tops, brown leather easy chairs with foot rests, and grained steel cabinets for clothing. Private donations for room furnishings were received at $200 for most of the rooms and $300 for the better ones. As to dishes, each floor has a distinct pattern on the dishes, so that all dishes may be sent to the main kitchen, cleaned in the dishwasher, and returned to the proper floor diet kitchen without extra work as to counting and keeping a record as to the floor from which they came. All dishes of a certain pattern are sent to the floor where that pattern belongs. The linen is standard, and will not be kept distinct for any room.

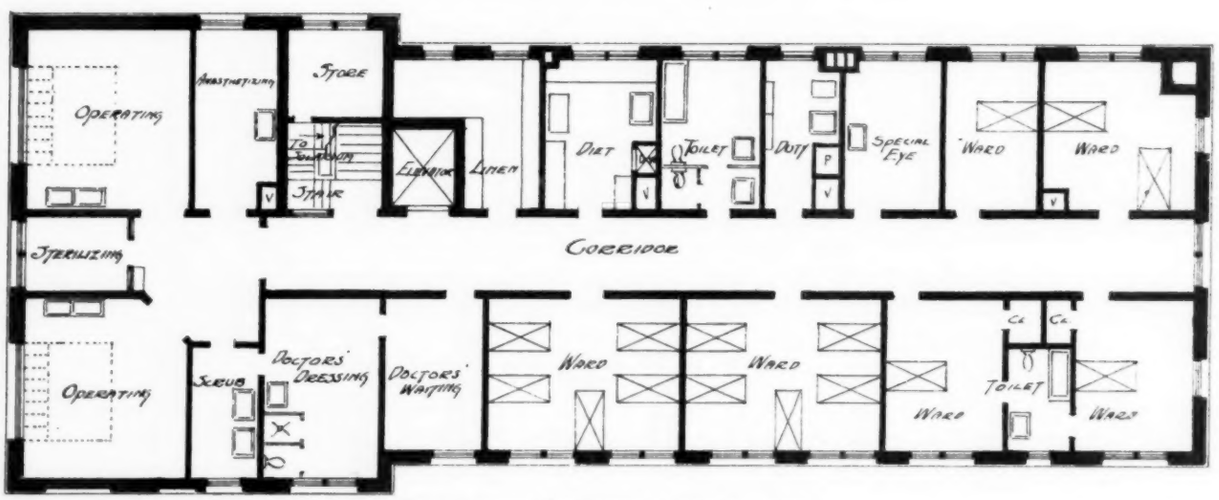


Fig. 8. Aurora City Hospital. Fifth floor plan.

When it shall be deemed necessary to enlarge

the building, this may be done by adding to the south end whatever is required, as the administration service and operating parts are adequate for the addition of many more rooms for patients.

The following is a fair statement of the costs of the various parts entering into the complete building ready for business:

Excavation and foundation	$ 3,400
General contract on building	65,500
Plumbing	9,500
Heating and ventilating	10,600
Tile floors and marble work	5,100
Elevator and dumbwaiter	3,900
Hardware	1,000
Vault doors	100
Shades	200
Window screens	700
Electric fixtures	1,000
Refrigerators	1,175
Total	$102,175

The total cost of the building, $102,175, makes a cubic-foot cost of 27.4 cents and a per-bed cost for ninety beds for all ages of $1,135.35.

For equipping the building the following are approximately the amounts:

Metal cabinets, cupboards, etc	$ 2,750
Kitchen equipment	1,500
X-ray equipment	1,500
Sterilizers and special equipment	4,000
Instruments, etc.	1,100
Furnishing rooms (including donations from individuals, societies, and clubs), linen, dishes, etc	9,000
Total	$19,850

This makes a total cost for building and equipment of $122,025, which does not include the architects' fees for plans and superintendence. The building as it now stands shows the combined work and effort of the hospital board, the building committee, the doctors' staff, the nurses, the architects, and the people, and we as a community feel proud of our accomplishment.

EFFICIENT HEATING FOR INSTITUTIONAL GROUPS

Hot Water Compared With Steam—Former Claimed to Have Many Advantages, Including Economy in Operation, Better Control, Greater Simplicity—Longer Life of the Plant and More Healthful

By ALBERT L. BAUM, M. E., Member of Jaros & Baum, Consulting Engineers, New York

THE historians of ancient Greece tell us that when a baby was born which was crippled or presented indications of growing up weak-bodied, the child was carried out to the mountains by its parents and left there, to be devoured by the wolves. Our ideas of humanity have progressed considerably since then. We no longer regard feebleness of body as a curse punishable with death; we think of it, rather, as a terrible misfortune, and strive to the best of our ability to minimize the suffering it causes, and, where possible, alleviate it and prevent its spread. The last twenty years have seen an enormous increase in the number of institutions of all kinds for the welfare of mankind. While many of these institutions have been the result of private funds, the community as a whole is beginning to realize the responsibilities which devolve on it, and is learning that more good can be accomplished by its efforts, since the expense for such welfare work does not fall so heavily on single individuals. Whether the community or the individual is to bear the expense, every effort should be made to get the most out of the money spent by designing and constructing buildings and equipment that will give the best service, and will contribute to the comfort and well-being of the inmates, attendants, and officers as much as possible for every dollar invested. In this connection, ultimate cost (which includes the cost of operation and maintenance, as well as first cost) is to be considered rather than the latter alone.

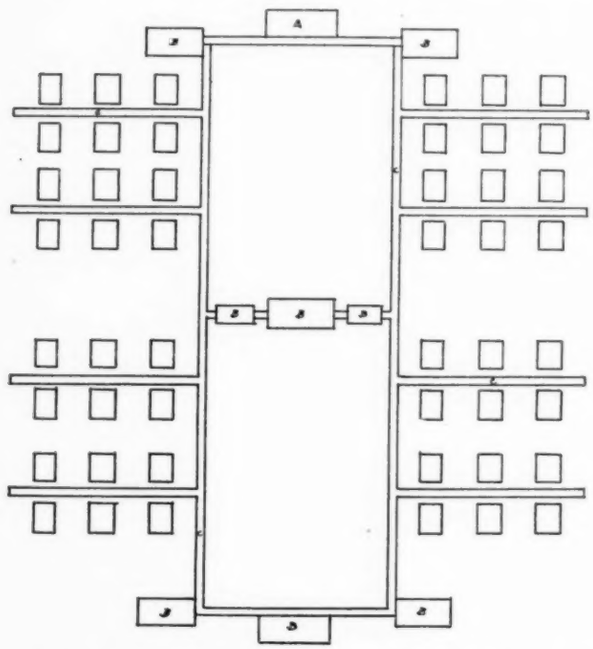
The present tendency in the design of our large institutions leans toward the village idea—i. e., a number of separate dwelling houses, interconnected by pleasant walks and passageways, and a few central buildings for service and administration purposes, the whole so arranged that it usually spreads over a considerable area. Generally speaking, sufficient funds are not at first available for the completion of the entire group of buildings as planned, but provision is usually made in such cases for future extensions and additions.

In serving such a group of buildings with heat, light, water, and power, the general aim is toward the centralization of service. The advantages of such a central plant are so well known, and have been presented so frequently, that I need not review them again. I shall take them for granted, and shall use the central plant as a starting point for this discussion of the type of heating system best adapted to such a group of buildings. It is obviously important that such a heating system be simple, reliable, and effective. Good and healthful living conditions are vitally connected with proper heating. An error in the determination of so important a feature is most serious, and likely to result in tremendous expense if a rectification of that error is to be made at a later date.

The central plant having been determined on,

the two possibilities as mediums for heating are steam and hot water. In order to more clearly understand the nature of the problem, let us consider a layout such as shown in the diagram, which represents a large institution of the hospital type, with isolated buildings. The distance from the power house to the end of the group is seen to be 2,500 feet, almost one-half mile, and institutions have been designed, such as Letchworth Village for the Feeble-minded at Thiells, N. Y., where this distance exceeds a mile.

Whether steam or forced hot water is circulated as a means of heating the buildings, some exhaust steam will be available from the engines or turbines of the central generating plant; usually, however, not nearly enough for the full heating



Block plan of institution of hospital type, with isolated pavilions. A, central boiler plant and power house; B, administration and service buildings; C, interconnecting passageways for pavilions. Distance from boiler plant (A) to farthest building (B), 2,500 feet.

load. With a back-pressure on the generating units of not more than 3 or 4 pounds, it is evident that the exhaust steam, even if enough were available, cannot be used for heating the far buildings. These, if steam heated, will have to be served with high-pressure steam, reduced in pressure at the buildings, which will at least permit the use of smaller distributing mains.

Economy demands that the condensed steam be returned to the boilers in the central plant. The facility with which this may be done with steam heat depends largely on the relative levels of the buildings. A gravity return system is by far the cheapest. If this is not possible, a vacuum return line system may sometimes be utilized. But here, again, not only are proper grades essential, but the distance from the last buildings to the central plant must also be considered. A last resort for getting back the heating returns (where relative levels forbid the use of either of the foregoing methods) is the system of pumping, and this means a number of return pumps scattered over the property, which must be provided with power, either steam or electric, and which also demand frequent attention both as to operation and maintenance. Such an arrangement materially decreases the advantages of the central heating plant.

Hot water as a heating medium, however, is not subject to such great restrictions. The water can be pumped regardless of grade, so long as proper provisions are made for relieving the entrained air from all high points where it may otherwise accumulate and cause air-binding of the mains. The water is heated in the central plant, easily utilizing (with a medium back-pressure) exhaust steam, which, as steam, could not be made to reach the farthest buildings. In plants of this kind the heating load is usually much larger than the power load. Under such conditions all the exhaust steam available during most of the heating season can be used directly for the hot water heating equipment; furthermore, the water of condensation is immediately regained without the slightest inconvenience. By no other distributing system can the heat be distributed with such little difficulty.

It is at once evident what a great advantage is effected by the central control of the hot water heating system. The operating engineer can at all times watch the temperature of the outgoing water, and vary it to suit varying weather conditions. During very severe weather the water may readily be heated as high as 200° F. (or even a little higher), thus giving out a large quantity of heat from the radiators and stacks in the buildings. As the weather becomes milder, the water temperature is reduced accordingly, thus cutting down the amount of heat supplied to each room in proportion to the decreased demands of the outside weather conditions.

With steam heat, overheating of the rooms is almost unavoidable, since the steam temperature in the radiators is nearly constant, regardless of weather conditions. The method usually followed in practice to avoid overheating in mild weather when a little heat is still required is to open the windows; this means, in effect, dumping out of the windows the equivalent of a large part of the coal consumed. One method of saving much of this waste is to use thermostatic control in all of the scattered buildings; but thermostats are delicate instruments, and are also expensive, both to

install and to operate. Tampering with them does them no good, and, where it is desired to make simplicity the keynote of design and operation, delicate instruments, scattered all over the buildings, should be avoided. Another method of effecting coal economy is the use of a vacuum-return or open-return line system, with fractional steam control, and automatic return valves on the radiators. But the necessary appliances are expensive to install, involve care and maintenance, and require the frequent manipulation of hand valves all over the institution.

The hot water heating system, on the other hand, by its variation of water temperature avoids the need of thermostatic or other scattered means for controlling the temperature of the rooms. It therefore eliminates from the buildings all mechanical devices, with the exception of one or two automatic air traps in each building and a hand valve (which need rarely be touched) on each radiator. By means of this central control, and its ability at all times to avoid overheating the buildings, the forced hot water heating system secures the maximum of fuel economy with the minimum of mechanical elaboration and of attendance.

Besides avoiding the loss due to overheating of the rooms, as just explained, the hot water system has considerably smaller radiation losses from the distributing mains than any of the steam systems. With the forced hot water system the maximum losses from this cause occur in the coldest weather, when the maximum water temperature is carried. As the weather becomes milder, the water temperature is lowered, and this in turn decreases the radiation losses from the mains. Steam, however, does not recognize changes in the weather. Whether the rooms are controlled by thermostats or by hand, or by open windows, the heating mains carry the steam continuously at a high temperature, since the temperature and pressure of steam are related by physical laws beyond the control of man. Hence the radiation losses, instead of becoming materially less in mild weather, as is the case with hot water, remain fairly constant throughout the heating season. The excess of these losses in the steam plant over those in the hot water plant for the same particular group of buildings may easily amount to several hundred tons of coal per year, depending on the size of the institution and the distance apart of the buildings.

The foregoing considerations have been presented from the point of view of operating costs. Coincident with operation are the costs of maintenance. The greatest part by far of the heating equipment of a large group of buildings on a widely extended area is the piping connecting all the heating surfaces with the source of heat in the central plant. In the steam heating system this entire network of piping carries during the heating season a mixture of steam, air, and moisture, while during the summer it remains dry and empty. With the forced hot water heating system the piping can remain at all times filled with water, from which practically all dissolved air has been expelled. It has long been known that piping does not rust out nearly as rapidly while it remains filled with such water as when in contact alternately with air and moisture. This gives the hot water system the advantage of much longer life, and longer life means a cheaper maintenance and depreciation charge, as well as less trouble from repairs.

There is still another phase of this question which, from a physician's point of view, should be important—namely, the health aspect of heating systems. Investigations have shown that particles of dust (largely organic matter) carried in the air begin to "burn" or decompose at about 165° F., and, since the temperature of the steam-heated radiator is always much higher than 165° F., it is at once evident what is taking place in a hospital ward heated by such radiators. The consistently lower temperature of the hot water radiators avoids in almost all cases this irritating annoyance from decomposing dust. It therefore secures a heating effect which is at once the more healthful of the two possibilities, and also affords a much more even temperature in the rooms due to the much lower intensity of radiation from the lower temperature radiators.

The only statement that can be made against a forced hot water system in favor of a steam heating plant for a group of buildings as herein shown is a possible slightly increased first cost of the hot water system. As opposed to this, however, are (1) the advantages of central control of the heat, (2) the simplicity of installation and operation, (3) the economy effected by avoiding overheating of buildings, (4) the economy effected by decreased radiation from the heating mains, (5) the longer life of the heating equipment, and (6) the more healthful character and more even distribution of the heat in the rooms, all of which go very far toward making forced hot water the ideal heating medium in a plant which proposes to be an effective and economic investment for the community as owner.

In a recent address before the Tri-State Conference of Charities in Boston, Dr. Frankwood E. Williams recommended the examination of children in their school days for hereditary diseases as a means of checking insanity. "Many bright, intelligent children in the adolescent period go suddenly insane through no fault of their own and with no hope of being cured," he said.

The MODERN HOSPITAL

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Contributors, subscribers, and readers will find important information on advertising page 34.

Real Public Health Service

Periodically we feel like alluding to and growing enthusiastic over one of the most brilliant pieces of public health service that we have ever known. We refer to the control by the United States Public Health Service of the bubonic plague situation in New Orleans.

Some two years ago, it will be remembered, there were eighteen or twenty cases, very close together, of bubonic plague in our southernmost city, most of which terminated fatally. In any other circumstances this would have been a quarantinable epidemic, and would have given rise to most acute alarm throughout the United States and indeed throughout the world. A high wall would have been built about New Orleans, constructively speaking, and intercourse with the rest of the world would have been prohibited, or put under such restrictions as to shut the people of that city off from social or commercial intercourse with the rest of the country. Immediately when this epidemic gave its first signs, the Public Health Service stepped in; that mere fact quieted whatever alarm may have started, and the justification for the country's entire confidence in that service is shown by what has transpired since. Not one single individual has had his freedom interfered with, not a steamer and not a train have been delayed or put out of service. The city of New Orleans has had as free communication with the rest of the country as any other city, and yet an immense amount of work has been done. The last human case of bubonic plague occurred in September, 1915, but only last week two rodent cases were confirmed. Intensive trapping of rodents and rat-proofing of dwellings was instituted in the neighborhood of their occurrence.

Since the first human case occurred in New Orleans two years ago, 795,186 rodents have been captured, of which 7,223 were captured during the week ending August 5, 1916. Down to date, 122,281 buildings in New Orleans have been rat-proofed. This is a record that needs no adjectives to describe.

Enlightened Medical Leadership

It seems discouraging that in this day of aggressive, preventive-administrative medicine the recognized medical organizations of the country are not in the forefront of leadership. Taking the country over, when we find that something notable has been achieved somewhere in the interest of the health and welfare of the people, it is a remarkable fact that almost never is the movement led by a medical organization, whereas it would seem that if any class of people should accept such leadership, it is the organizations of doctors.

A notable exception to this rule is the Public Health Committee of the New York Academy of Medicine, which for the last five years has rendered signal service to the health interests of the metropolitan community. This committee is composed of twenty public-spirited physicians who rank very high in their profession. By persistent devotion to the task they set for themselves, they have made the New York Academy of Medicine a potent factor in the health interests of the city, and because of the high character of the work the names of the academy and of the committee have become known all over the country. Reports of the committee on the various phases of public health are being read with interest in many other municipalities.

Among the numerous achievements of the committee, a few may be mentioned in this connection. They have called into life the Associated Out-Patient Clinics of the city of New York and the Health Federation of the city of New York; they have exercised a great influence in the reorganization of the health department of the city, which, under the leadership of Dr. S. S. Goldwater, a graduate of the committee, has become one of the best in the country; they have been instrumental in bringing about the transfer of the quarantine station at the port of New York from state to

federal control; to their efforts the increase in efficiency of the municipal hospitals of the city has been due in a large measure; and the city authorities have constantly availed themselves of the expert services of the committee for advice in medico-economic and medico-social matters, as well as in the preparation of the budget insofar as it relates to hospitals and public health matters.

By their work they have set an example for the medical bodies of other cities in the country, and have also set an example of high-minded citizenship and devotion to the cause of social progress.

The work was started five years ago, and two-thirds of the expenses of the committee have been borne by Mrs. E. H. Harriman. It is to be hoped that the body will some day receive a large endowment in order that it may further enlarge its field of activity and to put it on a permanent basis.

The Philadelphia Meeting

Elsewhere in this issue will be found a pretty full account of the coming meeting of the American Hospital Association at Philadelphia.

There are to be some radical changes from former years. Among other things, we are to have a social program in consonance with the expressed wishes of the association in the form of a resolution at the San Francisco meeting. It seems that the Philadelphia people are to outdo themselves in making the visit of those attending the convention pleasant as well as profitable. There is to be a reception, a banquet, a ride on the famous river, a theater party, a luncheon at the good old Pennsylvania hospital by courtesy of Mr. Test, the superintendent.

A committee made up of eighty hospital people of Philadelphia is to act as an entertainment and reception committee, visitors are to be met at the trains, and every hour of their stay in Philadelphia promises to be full of interest.

The complete program of the sessions is published also in this issue. A glance over its contents is sufficient evidence of its invaluable character. The participants are men and women famous in hospital work, and the topics they are to discuss are the vital issues that face the hospitals of this country at the present time.

We are wondering whether there is a hospital trustee in this country who even yet fails to realize the importance of having the executive head of his hospital attend the Philadelphia meeting. Trustees are exacting more and more of their superintendents. They are asking for elevations of standards in their hospital service; they are asking for greater economies, for a higher order of service to the sick, for better team-work with the medical staff and the various scientific departments of their institutions.

No one person holds the key to all hospital knowledge, and good hospital practice comes only from an exchange of experience between those who are responsible for the work. Unless the hospital superintendent is sent to the Philadelphia meeting, the hospital over which he or she presides will lose that much of the great fund of experience that will be poured out so liberally at Philadelphia.

We urge, we even beg, hospital trustees throughout the United States and Canada to make provision to send their superintendents to the Philadelphia meeting. One new hint picked up from his or her association with those who will attend the meeting is likely to more than repay the expense that will be incurred, and, as a participant at the whole meeting and all the sessions, the hospital superintendent should go back home full to the brim of invaluable information and suggestions for improvement in a thousand directions.

Some very important things are coming before the convention: the question of a permanent secretary, leading, in its turn, up to broader hospital activities on the part of the association; definite work for the future; the hospitals everywhere ought to be in touch with what is going on, they ought to participate in it in order that they may add to and gain from the great fund of information that is to be in the future more than ever available for hospital executives and their boards.

Please, for the sake of your hospital, you trustees, and for the sake of the sick who are dependent on it for their restoration to health; for the sake of your hospital economies, your finances, your good housekeeping, the scientific work that you tre trying to do; for the sake of your medical staff, who are entitled to the best that you and your superintendent can give to them in their arduous, exacting, and humanitarian work, please, for the sake of all these, send your superintendent to the Philadelphia meeting!

The Death of Dr. John B. Murphy

Dr. John B. Murphy, of Chicago, died on Friday, August 11, at 3:30 p. m., on Mackinac Island, where he had gone to rest, and, mourned by many thousands of people of his home city who gathered about his bier, he was laid to rest in Calvary Cemetery, Chicago, on Monday, August 14.

Dr. Murphy had suffered for a long time from a complication of diseases, which culminated in a fatal attack of angina pectoris. It was only his

indomitable energy and a feverish haste to do work he had mapped out for himself that had kept him on his feet and at work for the past four or five years. He knew that he was wearing himself out, and latterly had to leave his practice for quite long periods, but even at these times he did not rest because his talents, coupled with hard work, had opened to him secrets concerning disease, and he felt he must give them to the world while he was yet able to do the work.

Dr. Murphy was born fifty-eight years ago in a Wisconsin village, with no heritage of fame, and with no other endowment than a splendid mind in a splendid body. His early years were full of

DR. JOHN B. MURPHY.

struggles, which undoubtedly prepared him for his after life of unremitting toil. He had seen a thousand triumphs, but he never paused, and went along his way from triumph to triumph to other work; he never spared those about him, and exacted of his associates and assistants unceasing labor, but he spared himself least of all. During his whole life he worked with a feverish haste as though he had much to do and little time in which to do it. That he did much, all the world knows, but his biographers will have difficulty in singling out the most valuable piece of work that he did.

Dr. Murphy's early work on intestinal surgery will live always. He made the operation for appendicitis almost minor surgery. Then the brain engaged his attention, and his work in that field was epochal, and the mark of it will be followed as a guide for many years to come. He did much pioneer work on the nerves and arteries; ten years before nerve splicing and artery anastomosis had been taken up seriously in the research laboratories, Murphy had put the stamp of his own studies on that field, and the later work perfected clinical practice. Then he found that bone surgery and the surgery of the joints needed new inspiration, and that there was much to be done in that field, and all the surgical world will follow him in this branch of the science far into the future. It was in 1898 that he published his "Surgery of the Lung," which launched the memorable controversy on artificial pneumothorax. Murphy's propositions made at that time have now become standard practice. More recently he had felt that there was work to do in that large field which we commonly call rheumatism, and there is no doubt that there will be published at an early date his latest contribution to surgery in this field. But the surgeons will give him, now that he is gone, credit for brilliant leadership in many directions, and, as he was known to his assistants and associates and his friends as "the chief," so he will be known wherever surgery is known as "the chief."

There is no doubt that Dr. Murphy was many times and often misunderstood; his rarest faculty, it might be said his greatest talent, was that of leadership; the paths of others meant nothing to him, and, even when he stated a patent and old fact, it was clothed in such new garb that it seemed new. His thoughts were all along original lines; he seemed never to be able to do things along the beaten paths; he took short cuts and rose to brilliant heights where other men plodded and floundered. That was why he was misunderstood. But the great surgeons of his time will do sufficient honor to Murphy's memory as a surgeon. We wish to pay our tribute to him as the foremost advocate of good hospital service.

In the spring of 1911 Dr. Murphy sent for one of the editors of THE MODERN HOSPITAL, then at the head of a large institution, and urged the creation of a section on hospitals in the American Medical Association, of which he at that time was president, and it was through his active and aggressive leadership that that section, which had been refused a year before, was created by unanimous vote of the House of Delegates of the Association at the Los Angeles meeting. At the session of 1912, the first session of the Section on Hospitals, he made the opening address and introduced the section to the profession at Atlantic City.

A little later he urged the creation of a hospital journal, and gave his promise that if such a jour-

nal was established along lines that he had thought out, he would give it his heartiest support—morally always, and financially if necessary. THE MODERN HOSPITAL was the result, and long before the first number was published, when only in its trial form, he wrote the following letter to one of the editors:

July 21, 1913.

Dear Doctor: I received today the initial announcement of THE MODERN HOSPITAL. I wish to congratulate you on your foresight in preparing and editing a journal on this subject. There is no field in the entire range of medicine that needs standardization as much as hospital management. The waste of space, of material, dressings, drugs, etc., in hospitals is appalling, such as would bankrupt any other line of business. The treatment of and obligations to patients in many of the details of hospital work need radical reformation. These and a thousand other things need to be given close attention by hospital managements. The purchasing department and the checking department are anything but businesslike.

I feel that your journal should be in every hospital in the country and in many places in the same hospital, and that it will be the best investment that a hospital management could possibly make. Put my name down for a copy for Mercy Hospital.

With most hearty wishes for success in your undertaking, I am, Most sincerely yours,

(Signed) J. B. MURPHY.

Later on, when committees of the American Hospital Association, the American Medical Association, and the Clinical Congress of Surgeons of North America were attempting some sort of standardization by way of inspection and marking, and when those attempts seemed almost hopeless because the hospitals themselves resented the attempts of the committees to invade their privacy, as they thought, it was Murphy who suggested that standardization should come from within and not be forced from without. The Catholic Hospital Association was the result, or at least the strong support of THE MODERN HOSPITAL to that association was given because of his insistence that the Catholic hospitals should raise their standards themselves from within.

It was Murphy who suggested the creation of hospital associations in the several states because he believed that each state was a hospital problem within itself, and that the hospitals could be rallied about a state association—if not because of altruistic sentiment, then because of self-interest.

Dr. Murphy is gone, but his spirit will continue to lead along the upward paths for many years to come, and, as he had healed the sick and the hurt to an extent rarely, if ever, achieved by any other medical man, so his work and his discoveries and his leadership will go on healing disease and preventing disease. He gave to humanity all he had to give—and it was much.

The Industrial Welfare Number

The August Industrial Welfare Number of THE MODERN HOSPITAL was a great surprise to those who had been accustomed to follow the course of events in public health and hospital work.

More than 600 industrial corporations have expressed a great interest in the subject of industrial welfare as the result of the propaganda set in motion by THE MODERN HOSPITAL. We have heard from hundreds of corporations since the August number was issued, and have received many congratulatory messages; also many inquiries that seem to presage that the corporations are thinking along some new channels and are asking themselves many sane and sensible questions about the directions of their own work.

As we announced in the July and again in the August number, we are to continue a regular department of Industrial Welfare, and we offer the services of THE MODERN HOSPITAL in all of its departments to help corporations solve any of their welfare or health problems. No trouble will be too great for the organization of THE MODERN HOSPITAL to take, and we will feel abundantly repaid if we shall be able to help, in ever so small a degree, to something like settled standards of industrial welfare.

In the meantime one of the problems mooted in the August number, and more especially in the Welfare Department of this issue, by the surgeon-general of the public health service of the Government, concerns a better designation of that which we have come by common consent to call "welfare service"—exceptions are taken to the phrase. General Blue suggests a new name, and we shall be glad to hear from the corporations on this point and to have suggestions from them as to what this new thing shall be called.

We shall be glad also to hear from the corporations on any other subject concerning health activities for their employees. We invite the corporations and the workers to use the columns of THE MODERN HOSPITAL to discuss their viewpoints concerning this, one of the most interesting, attractive, and necessary fields of the social life of our time.

Among the Christian emperors, Justinianus (527-567) showed the greatest zeal for the establishment of benevolent institutions. In conjunction with his wife Theodora he founded in Constantinople and on the road to Jerusalem a number of xenodochia, and bestowed on all these establishments the legal rights of church institutions.—J. Marcuse.

Contract has been awarded for a new men's ward at the Wyoming State Hospital for the Insane at Evanston.

AMERICAN HOSPITAL ASSOCIATION MEETING AT PHILADELPHIA

Eighteenth Annual Conference of the Association to Be Held at the Bellevue-Stratford Hotel, Philadelphia, September 26-29—Plans for the Convention and Comment on the Papers Which Will Be Read

Philadelphia Plans for the Convention

COMMITTEE ON ARRANGEMENTS OUTLINES SOCIAL PROGRAM AND ORDER OF PROCEDURE

All Philadelphia is looking forward with pleasurable anticipation to the coming convention of the American Hospital Association, and is prepared to give the organization and each individual member a right royal welcome.

HEADQUARTERS

The Bellevue-Stratford Hotel has been chosen for the headquarters of the association during the convention, and already many members have reserved accommodations at that famous hostelry. All meetings and sessions will be held on the magnificent roof garden, where also the commercial and noncommercial exhibits will be on display. During the convention the whole roof garden will be at the exclusive disposal of the association.

REGISTRATION BUREAU

In the lobby of the roof garden will be located the registration clerks, four in number, who will register members, collect dues and receipt for same, issue membership cards, and give to each member a program, a badge, booklet about Philadelphia, tickets for theater, auto rides, boat rides, luncheons, etc. On account of the many plans made for the entertainment of guests and the impracticability of any one member taking in all of them, it will be well for all visitors to determine just what they want to do before registering. Every member is especially urged to register at the earliest possible moment in order that the local committee may know at all times how many people are to be provided for.

Fig. 1. Bellevue-Stratford Hotel, where the convention will be held.

NONCOMMERCIAL EXHIBITS

Although this exhibit does not come under the charge of the committee on arrangements, the fact that Dr. Alice Seabrooke is chairman of the committee is sufficient assurance that this will be attractive and instructive. Exhibits from all parts of the country are expected, and each one promises something new and interesting.

COMMERCIAL EXHIBIT

The local committee has been working on this feature of the convention for many months, and valuable assistance has been rendered by the officers of the association and many others too numerous to mention. The object of the commercial exhibit, as outlined by the Executive Committee of the association, is educational, and this idea has been ever before the local committee. There seems little doubt that the members will enjoy one of the finest exhibitions of hospital equipment and supplies that has ever been assembled on one floor. As the educational feature is the primal object of the association, it is hoped that members will carefully study each exhibit and give every encouragement to those firms who have aided us to assemble the vast exhibit. Those who are far removed from the larger cities, and who do not often enjoy the opportunity of seeing such a large assortment of hospital goods, should avail themselves to place their orders at the various booths for such supplies as they may require or may need in the near future.

SOCIAL PROGRAM

When the committee submitted its first program to the president, he was compelled to remind it that it would be necessary to hold a few sessions and to transact a little business during the convention, since the committee seemed to have quite forgotten this important matter. It may be inferred, therefore, that the entertainment of the visitors is limited only by the time available.

Tuesday, 26th, will be entirely devoted to the opening of the convention and the reading of papers and reports, so that no social function is planned for that day.

The evening of Wednesday will be free, and the committee has arranged to take to Keith's Theater as many members of the association as desire to go, and all who wish to attend are requested to obtain tickets at the registration desk when registering. On this night there will be many dinner parties at the various clubs and restaurants, for which guests will receive individual invitations from local friends and acquaintances.

Thursday has been set aside for a luncheon at the Pennsylvania Hospital, and every member is invited. This hospital, presided over by Mr. Daniel Test, a former president of the association, and one of the most active members of the local committee, is one of the oldest institutions of its kind in the city, being chartered in 1751. It is said to be the first in America devoted to the relief of the sick and injured. Hanging on the wall facing the entrance to the administration building is the world-famous painting, "Christ Healing the Sick," by Sir Benjamin West, and in the garden of the institution is a statue of William Penn. It is anticipated that the visit to this hospital will be one of the most interesting trips that can be made during the convention.

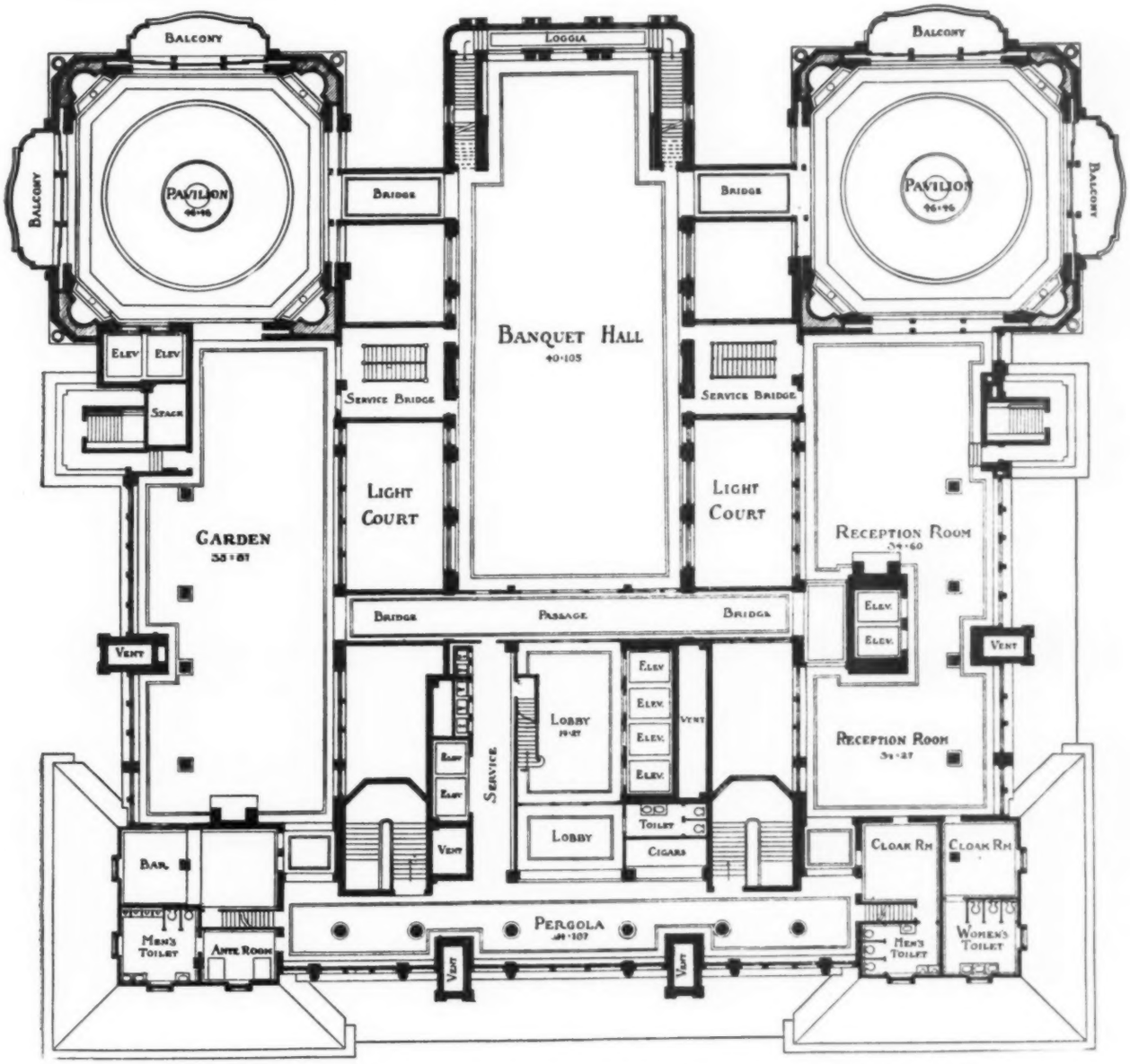

Fig. 2. Floor plan of the roof garden of the Bellevue-Stratford Hotel, Philadelphia, where all the meetings will be held and where the commercial exhibit will be installed. The association has rented the entire roof garden for the period of the convention.

On Friday afternoon all of the members will have their choice of two trips—one by automobile through Fairmount Park to the famous Revolutionary War battlefield of Valley Forge, and the other by steamer down the Delaware river to the Government quarantine station and back by way of the League Island Navy Yard, where all may inspect Uncle Sam's fighting ships. On the return trip a luncheon will be served on board the steamer, so that no one need hurry back. The steamer will arrive at the dock about 8:30 p. m. Those who choose the auto ride to Valley Forge will have an opportunity of seeing Washington's headquarters and many other sights of historical interest. Fairmount Park, through which the autos will pass, is the largest pleasure park in the world. It lies on both sides of the Schuylkill river for a distance of over five miles. On the river drive will be seen Lincoln's monument and many other notable monuments, and also a house on the bluff where lived Benedict Arnold, the traitor. No one who has ever passed through this beautiful park and along its picturesque Wissahickon Drive has ever forgotten its splendor and natural beauty. Returning from the trip, the automobiles should arrive at the hotel at about 6:30 p. m.

When the convention adjourns on Saturday, there will be special trains to take to either Baltimore or Atlantic City all members who desire to go. The former city is

Fig. 3. Corridor in Independence Hall.

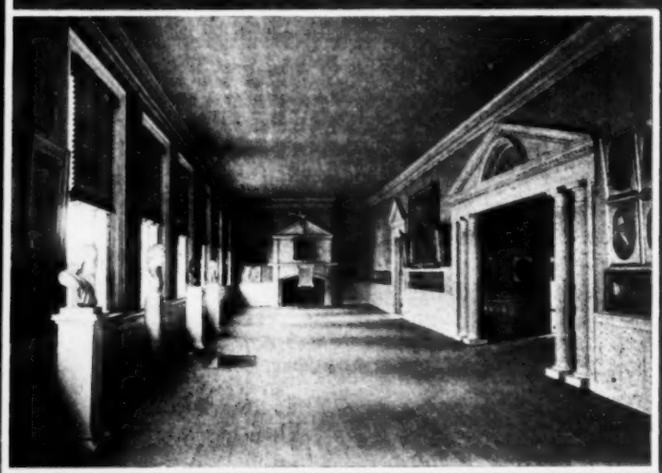

Fig. 6. Banquet room in Independence Hall.

Fig. 4. Independence Hall.

Fig. 5. Liberty bell in Independence Hall.

Fig. 7. City Hall.

VIEWS IN PHILADELPHIA

well worth a visit, and, aside from its interest on account of its educational institutions, is one of the most beautiful cities in America. The officials of Johns Hopkins Hospital have made special arrangements to receive visitors on that day, and it is hoped that as many as possible will avail themselves of the privilege. Atlantic City has been well called the world's playground, and is undoubtedly the most popular and most frequented pleasure resort in the country. The sea bathing is unexcelled, and every other enjoyable feature of a sea-coast summer resort is readily available at little cost. The famous board walk, extending the whole length of the beach front, is an interesting spectacle, crowded as it is throughout the day and night with throngs of happy pleasure seekers. Here, at last, will you find absolute relief from anything that looks like a hospital, a trustee, or a patient, and you can fill your lungs to your heart's content with the purest air that ever blew; where the only orders taken or given are for something good to eat or drink, and the only admissions and discharges are to the entrances and exits of cafes and shows. But why continue, for it is certain that within twenty-four hours you will have completely forgotten that you have ever seen a hospital, if, forsooth, you will not have completely lost your identity.

SOUVENIR BOOKLET

As each member registers he will be supplied with a booklet containing the names of the officers of the association, a short history of the organization, the social program, and an excellent description of Philadelphia and vicinity, with street guide, map, etc. The booklet will also contain the name of each hospital, with location, the names of superintendents, and, finally, the names of all the commercial exhibitors.

BADGES

A special badge has been designed by the local committee and approved by the president for this occasion. These insignia are very neat and well worthy of careful preservation. There are separate badges for the friends of members, which can be obtained at the time of registering.

RECEPTION COMMITTEE

The hospital superintendents of Philadelphia, sixty strong, will form a reception committee for the purpose of meeting all guests at the various railroad stations, take them in autos to their hotels, and, in general, make them feel at home. Automobiles for this purpose will be decorated with banners on which will be painted the name of the association, and the colors will be yellow and blue. The local committee is particularly desirous that all who visit the city shall be saved any possible inconvenience, and that everyone shall be made to feel at home and among friends. The committee is at the command of the association for the accomplishment of this result.

It is the confident belief that this, the eighteenth annual convention, will be one of the most successful in the history of the association, that all who come will hear a most instructive program and have a very enjoyable time, and, finally, that it will be a sad misfortune for anyone to miss this meeting.

A Welcome From the Convention City

CITY COUNCIL, HEALTH OFFICERS, COMMITTEES, AND CITIZENS PREPARING TO ENTERTAIN OUR HOSPITAL FOLKS

Thirteen years ago Philadelphia had the honor of entertaining the American Hospital Association, then known as the Association of Hospital Superintendents. The small society of that period has grown beyond all thought of its founders, and, now numbering hundreds to its tens at that time, it again gives Philadelphia the pleasure of welcoming it. The local committees are busy perfecting their plans for the reception and entertainment of the members and their families and friends.

Not only will the association meeting be a rare treat to all interested in this line of work, but the city of Philadelphia and its vicinity are full of historic, interesting, and instructive places. The opportunity to see these for the first time, as it will be for many, will add much to the interest of the trip.

Dr. H. K. Mohler, superintendent of the Jefferson Medical College Hospital, secretary of the local committee.

Dr. William H. Walsh, chairman of the local committee of arrangements.

The program has been arranged with a special view to the entertainment of our guests. The city council invited the association to meet here; the director of public health and charities, Dr. Wilmer Krusen, is tireless in devising ways of interesting all who come; and Dr. William H. Walsh, the chairman, assisted by his committee, has left nothing undone that will conduce to the pleasure and profit of the visiting members and all in attendance.

Philadelphia is a medical center, six colleges affording an opportunity unequaled elsewhere. The stores, the churches and schools, the manufactories and publishing houses, the art galleries and museums, will tempt many to linger long, and the "City of Brotherly Love" extends to all its most cordial invitation to come and prove its hospitality.

ALICE M. SEABROOKE.

Famous Philadelphia

Our association meets this year in the famous old "City of Brotherly Love." We shall have not only the most up-to-date, progressive, and the best hospital meeting the association has ever had, but we shall all have an opportunity to link the present with the far distant past, and those who attend the convention will have spread before them a kaleidoscopic view of American history, the like of which they will never be able to obtain elsewhere. It will be a liberal education, and to those of us who were partial to history in our school days it will be an inspiration to go back over the scenes of America's early struggles, catastrophes, misfortunes, and final triumphs.

Fortunately, this year it was determined by the president and executive committee of the American Hospital Association to mix pleasure with business, and the committee on arrangements has prepared a program that will enable us, not only to enjoy the society of each other, to renew friendships made in previous years and to make new ones, but it will enable us to get the closest and most intimate view of the great past of our country.

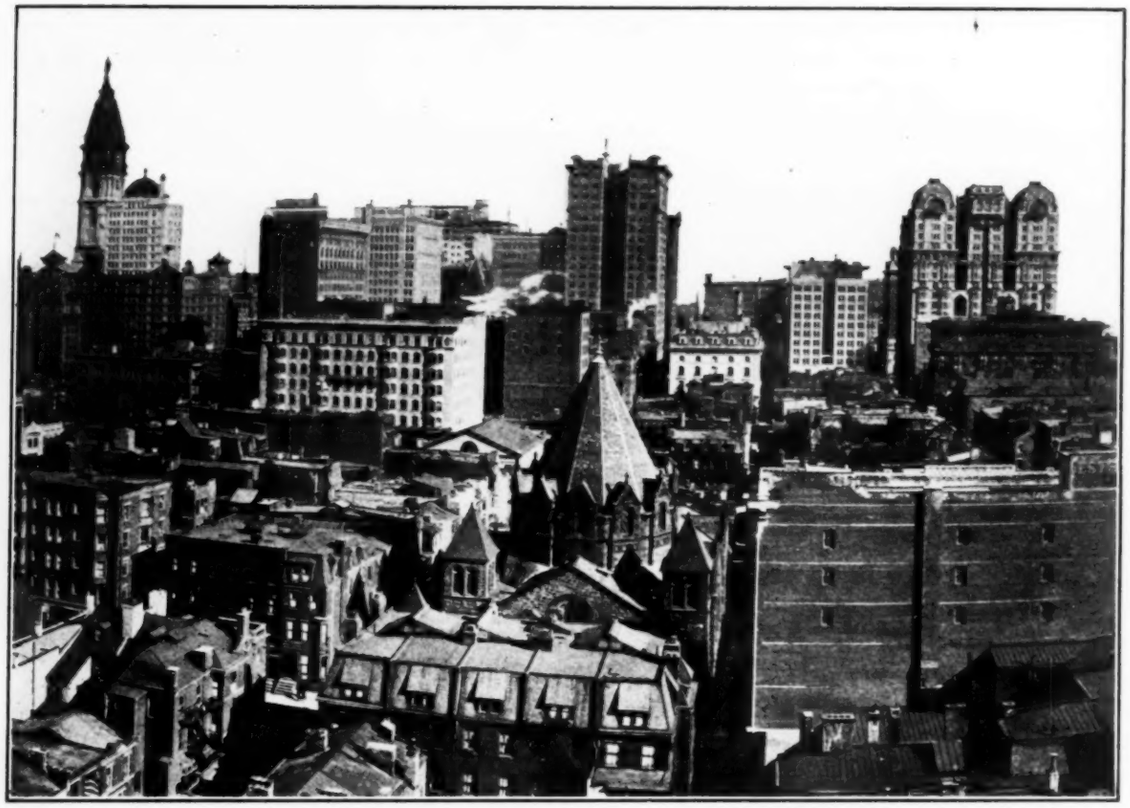

Fig. 8. Bird's-eye view of Philadelphia.

Philadelphia today is among the very foremost in America in so many respects that a mere recapitulation would be tiresome; but it was also the birthplace of many arts and sciences, the beginning of many practical every-day industries. The first steamboat that ever floated was on the river at Philadelphia, the first printing shop in America was founded there, the first library, the first university, the first medical school, the first book was made there, and the first banking institution begun, the first mint, the first type foundry, the first water works, the first board of trade, the first trust company; and, while we are accustomed to talk about "sleepy" Philadelphia, evidently the Quakers have not been asleep, because its wealth today is fabulous. With one-sixtieth of the population of the United States, it produces one-twenty-seventh of all the goods manufactured. It makes up more raw material into manufactured products than any other city. It leads in the value of its manufacture of textiles, carpets, rugs, leather goods, hosiery, knit goods, woolens, locomotives, steel railway cars, iron and steel ships, felt hats, saws, upholstered goods, oilcloth, and many other articles. It manufactures 211 of the 264 products made in America.

But we like the old Philadelphia best. It was veritably the "cradle of American independence," and while we are there we shall have an opportunity to see Independence Hall, where the declaration of independence was signed and under whose dome sleeps the old Liberty Bell; we shall see Carpenter's Hall, on a back street, where the first Continental Congress was held and whose halls almost echo the eloquence of Patrick Henry and Benjamin Franklin; Congress Hall, where the early congress met; the Betsy Ross house, at 239 Arch street, where the first American flag was made; Christ Church burial ground, where Benjamin Franklin lies; the University of Pennsylvania, that the old lightning tamer founded; Fairmount Park, the largest pleasure park in the world, and a thousand other places of equal fame and equally dear to every American.

Not only all this, but those of us who come out of the West will have an opportunity to pass by some of the famous places of our country. Many of us will travel by the old Baltimore & Ohio road, now renewed, rejuvenated,

Fig. 9. Carpenters' Hall.

and brought up to date; but we shall not forget that it was the first railroad in this country, and perhaps we shall see Old Ironsides, the famous locomotive that pulled the first car in the world over steel rails in 1728. We shall see Harper's Ferry, Wilmington, where the battle of the Brandywine was fought, and if we have time we shall see the beautiful old stream, now almost every foot given over to park purposes. We shall pass through Relay, twelve miles from Baltimore, where Stephen Morse sat and sent the first telegram that was ever transmitted. We shall see Valley Forge, made famous by Washington and his starving troops, many old battle fields of the Revolution and the Civil War, the wonderful Potomac river and its historic guide posts over which Langley flew the first flying machine. We shall cross the Allegheny and the Blue Ridge mountains, and pass through that country where Washington and Braddock fought the Indians.

Fig. 10. Steamer City of Wilmington, on which members and their friends will take an excursion on the Delaware river.

We shall probably stop at Washington, the most beautiful city in the world, and recently made famous by that marvelous architectural grouping of national buildings. Those who have not been to that section of the country where we are going should make every effort to participate in what is undoubtedly to be a memorable visit in the lives of all of us.

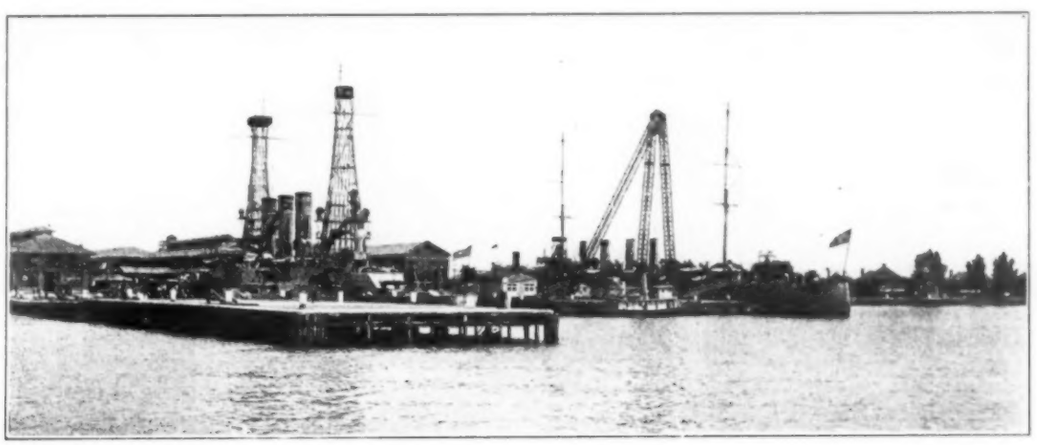

Fig. 11. League Island Navy Yard.

The Program for Philadelphia

MANY UNSETTLED PROBLEMS OF GREAT INTEREST TO HOSPITALS TO BE DISCUSSED BY EXPERTS

Each annual meeting of the American Hospital Association serves to bring forward, as part of the program, nearly all the live topics under discussion and study in the hospitals of the country. This year is no exception, but, on the contrary, the program for the Philadelphia meeting seems to include discussion of more serious problems than have ever been brought together before. Beginning with the address of Dr. Winford Smith, president, and ending with the last paper on the last day, there is to be a feast that hospital administrators, trustees, medical staff members, and financial supporters of hospitals cannot afford to miss.

We do not know what Dr. Smith is to discuss in his presidential address, but it goes without saying that it will be well worth while. Dr. Smith has a gift for writing, and more especially a talent for striking keynotes, and we may expect something good from him.

Mr. Borden, trustee of Union Hospital, Fall River, is to report for the Committee on Constitution and By-laws. For several years we have been talking about changing some of the organic laws of the association, changes in the direction of a broader democracy in the business conduct of the association. Last year, at San Francisco, some resolutions were passed, one providing for an executive committee to be appointed at large, it having been the habit heretofore to appoint that committee as a sort of arrangement committee for the following convention, the members all hailing from the convention city of that year. It was thought at San Francisco that this was wrong, and that an executive committee should be more representative of the hospital field, and that members should be selected from various sections of the country, the San Francisco resolution having been in the nature of a suggestion to the new president, who acted on it this year.

Another vital problem is the make-up of membership in the association. It has been felt for some time, by a good many members of the association, that active membership should not be confined to superintendents of hospitals,

but that everybody in active work in the hospitals should have an equal voice and vote.

Last year, at San Francisco, there was also adopted a resolution providing for a commercial exhibit at Philadelphia, but there is nothing in the organic law of the association providing for this. Dr. W. H. Walsh and his committee on arrangements and entertainment and commercial exhibit, have prepared a commercial exhibit for this year, and those in attendance will have an opportunity to judge for themselves whether the commercial exhibit should become a fixed feature of the association meetings, sanctioned in the organic law.

Another problem which Mr. Borden's committee will report on probably will be the method of electing officers of the association. Heretofore there has been a nominating committee, and the committee's nominations have usually been accepted by the association. The wiser heads in the association have felt for many years that if nominations were allowed to originate in a committee appointed for a whole year, the choice of officers could be more carefully made than if nominations were made on the floor and officers elected on the spur of the moment. It rarely happens that officers chosen in that way meet the requirements as well as those chosen after a careful analysis of the situation by a responsible committee. But there are members of the association who prefer the floor nomination method.

DR. WINFORD H. SMITH,
President American Hospital Association, Superintendent Johns Hopkins Hospital, Baltimore, Md.

Another question that will come up before Mr. Borden's committee is that of a permanent secretary. There has been no permanent secretary to date, and the income of the association from membership dues has not been sufficient to justify the election of a qualified secretary, with salary sufficient to pay him or her. It was believed by some members that the commercial exhibit, if properly conducted, would go a long way to help finance the permanent secretaryship, and that with such an officer the association could broaden the scope of its work and do many things for its members that are not now being done.

Dr. Charles H. Young, superintendent of the Presbyterian Hospital, New York, is to have a paper on "Medical Organization and Medical Education." Dr. Young is perhaps in a better place to discuss this subject than almost anyone else because the Presbyterian Hospital has just recently become affiliated with Columbia University and has broadened out to be a teaching hospital.

Dr. Young, moreover, has a very wide-awake medical staff that has been of immense value to him and to the hospital over which he presides. There is, to most of us, a very clear line between the activities of the medical staff and the administration of the institution; this line has not been clearly drawn up to this time. It has been drawn in the Presbyterian Hospital, and it has developed there that there was plenty of splendid work to be done both by the medical staff and by the executive of the institution—work that need not overlap and that can best be accomplished by a clear understanding of the specific duties and obligations of each.

TUESDAY AFTERNOON

The afternoon session of the first day, Tuesday, September 26, is to begin with discussions on the nursing problem; first, there is the report of the Committee on the Training of Nurses, by Miss Crandall, and, second, the report of Miss Aikens' Committee on the Grading and Classification of Nurses.

Miss Crandall thinks things are moving in the right direction in the nursing field, and that the various problems are solving themselves nicely. She thinks that standards are being raised everywhere, and that the quality of the nursing is becoming infinitely better. Miss Aikens probably agrees with Miss Crandall on those points, but Miss Aikens finds a hiatus in the nursing world that the association ought to undertake to fill by some definite pronouncements on the problems of classification and grading. Miss Aikens thinks there ought to be at least three classes of nurses—one made up of highly educated women, capable of being molded into teachers; another class not so well equipped educationally, who can be trained as actual nursing nurses; and a third class to be made up of women with grammar school education, who after a shorter period of training than three years could be trained for nursing among the middle classes who cannot afford to pay regular graduate nurse fees. The nursing profession agrees that there ought to be this last-named class, but that they ought to be called "mothers' helpers" or "attendants," and that they ought to be distinguished definitely from trained nurses entitled to the R. N. degree. This is an old problem, and we have it every year.

Dr. Babcock's paper on "The Open Door Hospital" is also to be read on Tuesday afternoon and discussed by Dr. Fowler, superintendent of the Louisville City Hospital. Dr. Babcock has one of the best administered hospitals in this country, and he has a medical staff the members of which have definite executive duties to perform, and Dr. Babcock leans on his staff and expects it to keep the hospital's medical service and technical operations up to a high order. But Dr. Babcock also has many outside physicians bringing patients into Grace Hospital; these outside physicians are carefully chosen, and only those competent to do good medical and surgical work are allowed the privileges of the hospital.

This problem of a hospital staff versus the so-called "open door" is an insistent one all over the country in both large and small hospitals. As hospitals are drawing closer every day to universities and medical schools, and more and more of them are becoming essentially teaching hospitals, there is growing up a tendency to believe in a definite staff with definite duties. A good many educators in the medical schools and universities are not satisfied that outside physicians shall have the privileges of the hospitals that work in affiliation with them, and insist on a strictly closed hospital, or one in which only the medical staff may work.

There is a very pronounced financial angle to this problem, and many hospital superintendents and boards say they would find it impossible to finance their institutions if outside physicians were not permitted to bring in paying patients. This part of the problem is answered by the closed staff proponents with the insistence that hospital funds should be raised by other means than from paying patients, and that finance has nothing to do with the morals of hospital administration. They say that a hospital cannot give the highest order of service to the sick if outside physicians are permitted to bring in their patients and do any kind of medical and surgical work that they please or that they know how to do.

Dr. Fowler will undoubtedly discuss the problem from the standpoint of a municipal hospital, and he ought to speak with great authority, because Dr. Fowler's own city has been regenerated recently. A few years ago it had four or five medical schools, and these have now been boiled down to one, which has had the effect of very greatly clarifying the medical situation in Louisville, and it ought to have had an uplifting effect on the municipal hospital.

DR. C. D. WILKINS,
First Vice-President,
Superintendent Charity Hospital,
New Orleans, La.

MISS NETTIE B. JORDAN,
Second Vice-President,
Superintendent Aurora General Hospital, Aurora, Ill.

DR. A. R. WARNER,
Third Vice-President,
Superintendent Lakeside Hospital, Cleveland, Ohio.

On this same afternoon also, Dr. R. R. Ross, superintendent of the Buffalo General Hospital, will report for the Committee on the Development of the Association. Undoubtedly Dr. Ross will find that the association has not been doing for its members all that such a body ought to be able to accomplish, and it would seem that the time has come for a man as discerning and analytical as Dr. Ross to recommend some specific duties and obligations for the association. Just what these are it would be unfair to Dr. Ross and his committee to attempt to anticipate.

TUESDAY EVENING

Tuesday evening's session will be given over to a symposium on "Out-Patient Work." Dr. Cabot, of Boston, who has led in clinical dispensary work for years, will talk about what dispensary work should stand for; Dr. Wm. F. Snow, secretary of the American Social Hygiene Association, will talk about "Venereal Clinics and Their Proper Lines of Development." Someone else will talk about "Industrial Accident Cases in Dispensaries and How They Should Be Handled and Financed," and the evening will wind up with the report of Mr. Davis' Committee on Dispensaries and Out-Patient Work.

This ought to be one of the best sessions of the whole meeting. No one knows more about what dispensary work should stand for than Dr. Cabot, and he can always be counted on for some new wrinkle and new suggestions as to the progress of dispensary work in order that it may become broader and reach deeper into that class of the public for which dispensaries are supposed to be conducted.

Dr. Snow has given an immense amount of time and thought to venereal clinics and the care of the venereal diseases. He has been everywhere and has seen everything, and knows what this country and Europe are doing about the venereal diseases, and he ought to bring to this symposium a clarity of thought and a fund of common sense that should be helpful to every hospital in the country because the venereal diseases are one of the most insistent problems in every hospital.

Mr. Davis and his committee, we know, have been giving us a masterful leadership in the progress of dispensary work, and the committee this year ought to have something new to offer and undoubtedly will.

Evidently President Smith had some difficulty in finding a speaker to discuss "Industrial Accident Cases in Dispensaries—Should They Be Accepted? How Shall the Finances Be Managed?" Nearly every state in the Union has passed laws for workmen's compensation, sick insurance, employers' liability, and many states have legislated on new features of industrial sickness service. Coupled with this service in the province of law-making, nearly all industrial corporations are doing more or less welfare work for their employees and many new questions have arisen, questions that ought to be discussed by this speaker: What are the proper limitations of industrial welfare work among corporations and what part of public dispensary service should be taken over by the corporations in behalf of their own employees? Shall industrial corporations be charged exclusively with the out-patient and dispensary care of all their employees, or, on the other hand, shall the nonlaboring members of the family be thrown on the mercy of public dispensaries and out-patient departments? Shall industrial corporations take care of the medical ailments of their employees or only of the injuries? And overshadowing all these problems is the ever insistent one of wages coupled with the

high cost of living: Will it help any if wages were so high in this country that employees and their families would be beyond the necessity of seeking aid from public free dispensaries? Or, Would poverty be just as insistent when sickness came to the home even though the wage-earner were paid wages large enough to enable him under good,

MISS LYDIA H. KELLER,
Secretary American Hospital Association.

careful management to finance his family, no matter how large, when sickness came? All these problems must be up for discussion in this Tuesday evening symposium.

WEDNESDAY MORNING

Wednesday morning Dr. Arthur B. Ancker, superintendent of the City and County Hospital, St. Paul, presents his report for the Committee on Hospital Construction. Dr. Ancker has one of the best hospitals in the country, and by all odds the most nearly perfect municipal hospital —perfect in architecture and administration. He has been building on his own account for more than thirty-five years, and, with an analytical and mechanical mind, he has delved deep into the problems of construction in every phase. He ought to bring hospital construction down to date for the benefit of the association.

Grosvenor Atterbury, of New York, is to talk on "Hospitals and Esthetics." Mr. Atterbury has not written much into the hospital literature, but he has done a great deal of work—some of it very excellent. He writes brilliantly, and his paper ought to be among the best at the meeting.

Dr. Howard, superintendent of the Peter Bent Brigham Hospital, is to discuss Mr. Atterbury's paper, and those who have been through the Peter Bent Brigham Hospital will agree with the proposition that Dr. Howard can put more esthetics into a hospital than any other administrator in the country; and yet Dr. Howard is full to the brim of good sense and good judgment, and he has a way of selecting the wheat from the chaff in hospital architecture, equipment, and administration second to none, and his discussion ought to measure up well beside Mr. Atterbury's paper.

Dr. Eliot P. Joslyn, of Harvard University Medical School, is to discuss "The Hospital Dietary" as the last feature of the morning's session, and Dr. Thomas McCrae, professor of medicine, Jefferson College, Philadelphia, is to discuss the subject. There is no more important problem in the hospitals today than the dietary; we know that, because our drug rooms are growing infinitely smaller year by year and our diet kitchens and the work done in them are growing larger. Many medical men have almost ceased the use of drugs, and are leaning harder and harder on the feeding of their patients. But the hospital dietary is perhaps capable of more exactness than any other department of the institution. The chemical constituents of food, the physiology of the digestion and the idiosyncrasies of individuals mean very much more, and feeding the sick does not contemplate alone the preparation and service of food, but it means the perfect jibing of the feeding and its effects as measured by the physical and laboratory findings as the case progresses. Dr. Joslyn and Dr. McCrae should make an interesting story of all this.

WEDNESDAY AFTERNOON

Dr. Robt. J. Wilson, superintendent of hospitals, of the New York Health Department, is to open this session, which is in reality a symposium on the communicable diseases, with a paper on "Disinfection and Other Practical Methods of Preventing the Spread of Infections in Hospitals." During the past year the New York Health Department has given up the cut-and-dried practice of fumigating homes after the patient has recovered, and in a bulletin not

MR. ASA BACON,
Treasurer American Hospital Association, Superintendent Presbyterian Hospital, Chicago, Ill.

so long ago Dr. Goldwater, then commissioner of health, explained that this abandonment of the old methods of fumigation was due to some careful studies made in the department, which showed that most of these methods were ineffective. Dr. Wilson in his work in the communicable disease hospitals had not relied on gas fumigation, and he has been studying carefully this problem for some time, and ought to throw light on the best methods of cleaning up after the infections and the best methods for preventing their spread.

Dr. William H. Walsh, of Philadelphia, was superintendent of the Communicable Disease Hospital of that city for some time, and did some fine work there. He also had charge of the Philadelphia General Hospital later on, and even in a building as old and dilapidated as "Old Blockley" he managed to cut down the cross-infections in a most measurable degree. His discussion of Dr. Wilson's paper ought, therefore, to be illuminating.

The next paper, "The So-called Diphtheria Epidemics in General Hospitals—Preventive Measures," by Dr. Clyde G. Guthrie, associate in medicine at Johns Hopkins, promises some light on a subject that at the present time is filled with misgivings and unsolved problems. The phrase "so-called" in the title of the paper raises the hope that Dr. Guthrie will help us to determine whether those diphtheria epidemics that come up so unexpectedly in our hospitals are in reality diphtheria, and communicable as such, or whether they are pseudo-diphtheria, as many pathologists have asserted. Some years ago a certain large hospital with 150 nurses got a case or two of what was diagnosed as diphtheria, and cultures were taken of all the nurses in the school, with the result that nearly one hundred of them had diphtheria microorganisms in their throats. Obviously the hospital was in a panic; all the nurses carrying diphtheria were isolated, and the hospital was closed to patients; nothing much developed, and the scare was apparently all for nothing. What was it? Perhaps Dr. Guthrie will answer the question.

Dr. Ross, of the Buffalo General Hospital, will discuss Dr. Guthrie's paper, and, as Dr. Ross not so long ago had an epidemic of this sort, he should speak as one having authority.

Dr. Milton C. Winternitz, of the pathological department, Johns Hopkins, will discuss "Autopsies—Methods of Obtaining Same and Measures of Protecting the Hospital." Of recent years Johns Hopkins has materially increased the number of its autopsies in proportion to the number of deaths, having now arrived at a figure of more than 60 percent of autopsies. There are ways of getting autopsies—arguments for friends and relatives, justification for autopsies, and their necessity for the protection of descendants of patients; and it is also greatly to be desired that there be autopsies in the interest of medical science. American hospitals have been far behind those of Europe in this respect, and for obvious reasons, but the percentage of autopsies is rapidly growing in this country, and Dr. Winternitz should throw so much light on the subject that his paper should be extremely helpful to hospital superintendents who are now finding it all but impossible to secure consents for autopsies.

Unfortunately Dr. Holt will not be with us at Philadelphia, as he died early in August in the hospital of which he was superintendent, and it is to be hoped that Dr. Smith will be able to find someone who had the same problems in regard to autopsies that Dr. Holt had—viz., a very large percentage of patients who were charity cases and who were foreigners, mostly Jews, who have a religious aversion to autopsies; and yet, when the writer of this comment was superintendent of Michael Reese Hospital, it was not difficult to obtain autopsies even where there was the greatest aversion to them.

AFTERNOON SESSIONS FOR SMALL HOSPITALS

Miss Jordan has carefully prepared a symposium for her first session on "The Creation and Management of a Community Hospital," and some of those whom she has on her program are doing very much in just the class of hospitals that need them most. Dr. W. T. Graham, superintendent of University Hospital, Iowa City, has a paper on "The Survey of the Community" and the analysis of the situation leading up to the creation of the community hospital, and Dr. E. E. Munger, Spencer, Ia., is to discuss Dr. Graham's paper. Dr. Munger, it will be remembered, drew the so-called Iowa law for the creation of the county hospital. A dozen or more states have enacted this law since, and now the county hospital has come to stay. No one knows more about the Iowa idea than Dr. Munger, and those who are in charge of hospitals in the states that have a similar law have much to learn until they hear Dr. Munger on the subject. Mr. Chapman, of Mt. Sinai Hospital, Cleveland, made a record in the St. Louis City Hospital for management of the physical departments. There is no difference between the management of the small and the large hospital, except in scale; the problems are the same and must be met in the same way.

Miss Martha Oaks, of St. Luke's Hospital, Davenport, will also discuss this subject. She has a small hospital and is managing it wonderfully well; she has probably more difficult problems than almost any other superintendent in the country. She has an entirely useless board of trustees and a splendid board of women managers; she has an aggressive medical staff and many good men, some of whom are rather insistent in many directions and in many activities, and Miss Oaks has done admirably and with such success that she now has $125,000 with which to build a new hospital. Her story ought to be of infinite interest and profit.

Miss Ida Barrett, superintendent of Blodgett Memorial Hospital, Grand Rapids, reads a paper on "Financing the Small Community Hospital." Miss Barrett has just finished building and financing her own institution, and she has done so well that now she not only has a splendid new hospital, but John W. Blodgett has made the hospital an endowment that takes it out of the needy class. If Miss Barrett will tell others in her paper how to persuade money into their coffers, she will meet a long-felt want.

Miss Barrett's paper will be discussed by Miss Jayquith, superintendent of the Children's Hospital, Worcester. Miss Jayquith also has just passed through hospital difficulties and come out triumphant.

Mr. Ralph Shepardson, the architect of Aurora, Ill., built Miss Jordan's new hospital at Aurora, which is just now being opened. Anybody who could please Miss Jordan in the designing of a hospital and in the building of it afterwards ought to have a mighty interesting story to tell, because he has probably had his troubles.

Mr. Shepardson's paper will be discussed by Miss Margaret Robinson, superintendent of the second of the Iowa hospitals to be built under the Iowa law. The story of the Jefferson County Hospital has been published, and it is a most interesting story, but it has now been in operation for two or three years, and Miss Robinson ought to bring the story down to date and tell us to what extent the people of the community, especially the rural part of the county, are supporting her hospital and patronizing it, because it is becoming more evident every day that there is great need of small community hospitals, especially in those communities where the rural population is progressive enough and far-sighted enough to give them proper support.

THURDAY MORNING

The Thursday morning session opens with the report of the Committee on a Bureau of Hospital Information by Dr. Howell. This committee has had pretty hard sledding for several years, has done some hard work, and has really made little progress, because it seems there is a great difference of opinion as to how and by whom a bureau of hospital information should be conducted. There

Fig. 12. Woman's Southern Homeopathic Hospital, showing also laundry in the center and nurses' home at the right.

Fig. 15. Woman's Hospital.

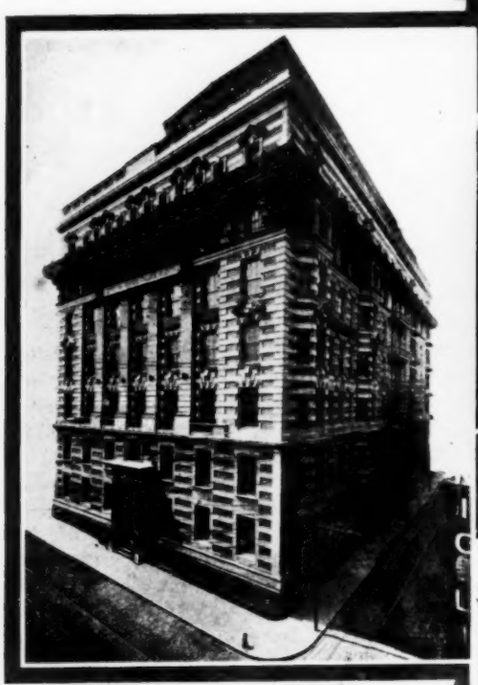

Fig. 13. Jefferson Hospital.

Fig. 16. St. Mary's Hospital.

Fig. 17. Presbyterian Hospital, showing also administration building and men's surgical ward.

Fig. 14. Medico-Chirurgical Hospital and College.

SOME OF THE HOSPITALS OF PHILADELPHIA

was an attempt made to get such a bureau inaugurated in connection with the public health service of the Government, but that failed because of Congressional disapproval; one of the large foundations was asked to take up the work, and that, too, failed for some reason which Dr. Howell will make plain, and perhaps Dr. Howell will also make some new proposals for the creation of such a bureau, possibly under the auspices of the American Hospital Association.

Dr. Hornsby will report for the Committee on Hospital Standardization. While he and his committee have done some work out in the field and feel that it has achieved much, there is not a great deal to report. Undoubtedly the hospitals are standardizing themselves from within their own walls, and in the past two or three years there is no doubt that hospital standards have been raised many degrees.

Professor John J. Bowman, director of the American College of Surgeons, will read a paper on "A Study of Hospitals for the Purpose of Arriving at Proper Standards." The American College of Surgeons, under the stimulus of Dr. Bowman's personality, has done a great deal of work in investigating the situation in the hospitals, and Dr. Bowman has visited many sections of the country and has made an intimate study in the medical schools and the hospitals. He is a brilliant writer, a splendid speaker, and his paper will certainly be enjoyable and illuminating.

"Team-Work and Stumbling Blocks," by Dr. Charles A. Drew, of the Worcester City Hospital, ought to be well worth while. Dr. Drew is a splendid hospital administrator, a careful and conservative man, who has a very large following among those who know him best; he knows what team-work and stumbling blocks are, and his guidance in regard to the one and his warnings in regard to the other should be most helpful.

There are far too few hospitals whose administrators pay any attention to dental work among their patients. Therefore the paper on "Dental Clinics in General Hospitals," by Dr. Thomas B. Hartzell, University Hospital, Minneapolis, ought to awaken the hospital people to a realization of one of the most important things in modern-day care of the sick, and Dr. Cox's discussion ought to emphasize what Dr. Hartzell has to say, because Dr. Cox has been in intimate association with some of the most progressive work in hospitals for a number of years.

THURSDAY AFTERNOON

There are to be two sessions on this afternoon—one for the large hospitals and one for small hospitals—conducted by Miss Jordan. In the large hospital section, Dr. Clover opens with a report from the Committee to Memorialize Congress to Place Instruments on the Free List. We may imagine that Dr. Clover will express a good deal of hopelessness in regard to results that his committee has been trying to bring about. The surgical instrument trades in this country are opposed to allowing foreign-made instruments to compete on an equal footing with those made in this country, and now the war has probably disturbed things to such an extent that even the Democrats will be thinking about a tariff wall.

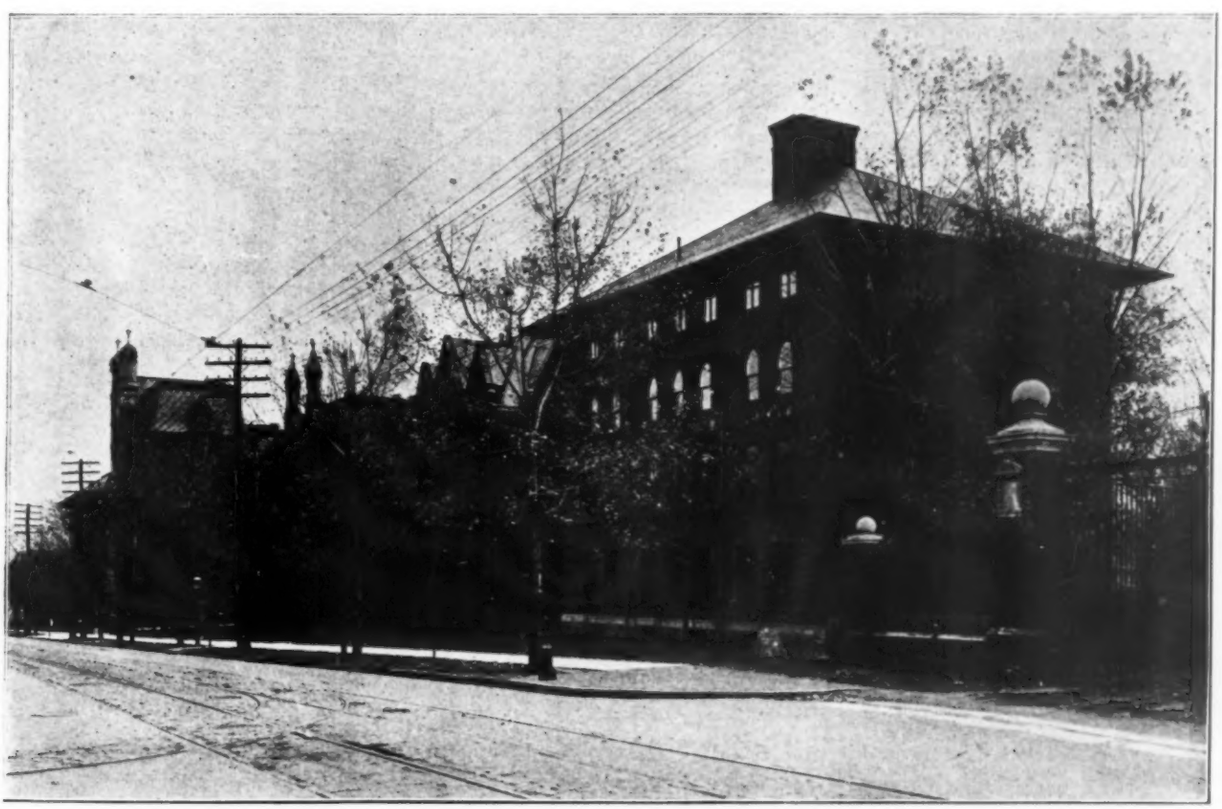

Fig. 18. University of Pennsylvania Hospital.

Dr. Warner, of Lakeside Hospital, Cleveland, is to report for the Committee on Hospital Finances and Cost Accounting. There is no one better qualified to discuss this subject, because Dr. Warner's institution has made some radical jumps in the last year or two, and he has had his hands full in handling his finances and keeping his budget down. In order to succeed he has had to adopt radical measures of accounting, and, since Dr. Warner writes well and talks well, his paper ought to be valuable.

Mr. O. H. Bartine, superintendent of the Hospital for

Fig. 19. Children's Hospital.

Ruptured and Crippled, New York city, gave to the association at San Francisco a most valuable paper on hospital construction. He goes one step farther in his paper this year and takes up the divisions of the hospital by departments and rooms. Those who enjoyed his paper last year and profited by it should by all means keep in touch with the thread of his narrative concerning hospital construction, and it is certain that they will profit greatly thereby.

Mr. Bartine's paper will be discussed by Dr. Bachmeyer, of the Cincinnati General Hospital, who also has had much experience during the past year or two in conducting the operations of the big new Cincinnati General Hospital that has been the cause of so much discussion.

Dr. Frederic Brush, superintendent of the Burke Foundation, White Plains, N. Y., has done more in regard to convalescent homes and has written more into the literature about them than anyone else. He has a new idea every day, and fortunately has the money to express his ideas into action.

Dr. Washburn, of the Massachusetts General Hospital, is to discuss Dr. Brush's paper, and between them they ought to illuminate a subject about which very much more is to be heard in the next few years. One of the radical directions of hospital progress during the next ten years is to be toward the establishment of convalescent homes in the country, more especially in connection with

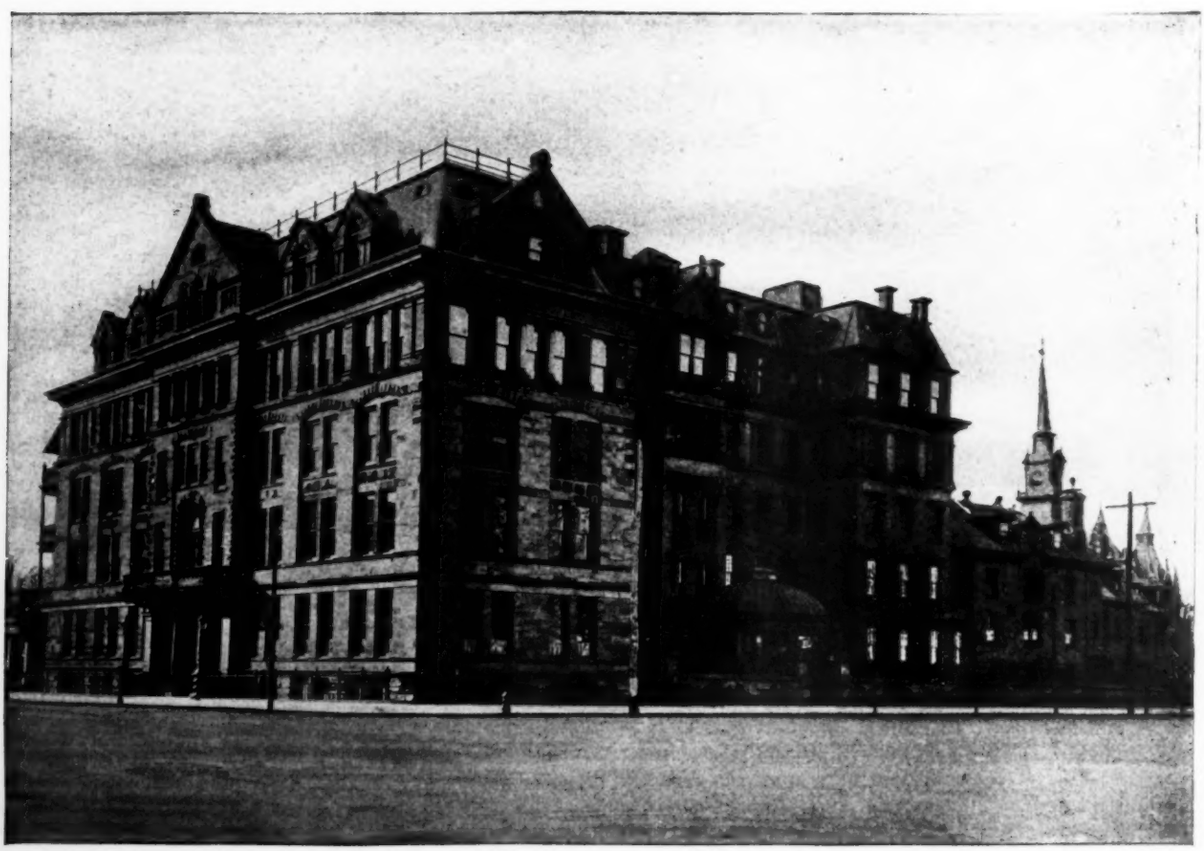

Fig. 20. German Hospital.

already established metropolitan hospitals. Members of the association are all vitally interested in this subject because even those who cannot hope to build or control convalescent homes in the near future ought to be thinking about adding the convalescent home atmosphere and its economies, convalescent labor principles, diversional work, and so on, to their present hospital activities, and it goes without saying that those who do hope to have convalescent homes or who now have them will get very much from this discussion.

SMALL HOSPITAL SECTION

The symposium selected by Miss Jordan concerns the scientific work in the small hospital, and Miss Mary Riddle, of Newton Hospital, Newton Lower Falls, Mass.,

Fig. 21. Jewish Hospital. Medical building.

will open the discussion with a paper on "How May a Hospital Superintendent Promote More Scientific Work in the Small Hospital?" Miss Emma Anderson, of Boston, and Miss Goodrich, of Teachers' College, are expected to discuss Miss Riddle's topic. Dr. Howland, of the Massachusetts General Hospital, will discuss the "Training of Superintendents for Small Hospitals." The Massachusetts General Hospital now has a training school for executives, and has been doing some really excellent work in that direction, sending out some well-trained women. Mr.

Fig. 22. New Rush Hospital.

Bishop, superintendent of the Robert Packer Hospital, at Sayre, Pa., is to discuss Dr. Howland's paper. Mr. Bishop and his hospital at Sayre are to be heard from in a large way in the next few years. He has brought hospital teamwork by way of an all-time medical staff to a higher development certainly than any other small hospital, and he has done well with it both from the standpoint of administration and in a financial way.

Dr. Pelton, of Elgin, Ill., is to discuss how the scientific services may be standardized in the small hospital. These services are not yet standardized, and hospital superintendents all over the country are asking questions about standards of scientific work. Dr. Pelton has given an immense amount of thought to the subject, and, being on the staff of a small hospital and in close touch with the activities of a very good institution, he ought to throw a great deal of light on a subject that is now extremely hazy.

FRIDAY MORNING

On Friday morning Dr. Summersgill, of the University of California Hospital, is to report for the Committee on hospitals and their activities, and some of the legislation is crude and unworkable, some of it is vicious, and some of it leads in wrong directions. The hospitals should Legislation. All the states are legislating in regard to certainly plan to go before their state legislatures and impress their wishes on those who are to be responsible for law-making; in most cases legislators are anxious for information as to the hospitals' side of the case, and wrong

Fig. 23. Hahnemann Hospital.

legislation is usually due to want of information on the part of the legislating body, coupled with lack of interest, or lack of action on the part of the hospitals. Hospitals are suffering greatly on the financial side from legislation in some states, and everybody ought to hear Dr. Summersgill's report because it should contain many valuable suggestions.

The next two papers, "The Hospital and the Surgeon," by Dr. Goldwater, and the report of the Committee on Efficiency and Progress by Dr. George O'Hanlon, of Bellevue, might well be bracketed, because today the hospital and the surgeon are much closer together than they have ever been, and recognition of their mutual interests will do more for efficiency and progress than anything we know about.

Hospitals of Philadelphia

For sixty-one years the Children's Hospital has rendered the most careful and skillful aid to the sick poor children of Philadelphia and vicinity. It is supported partly by income and partly by voluntary contributions, and no state aid is received. It has outgrown two successive buildings, and will shortly occupy the first section of its third establishment, on the half-square at Eighteenth,

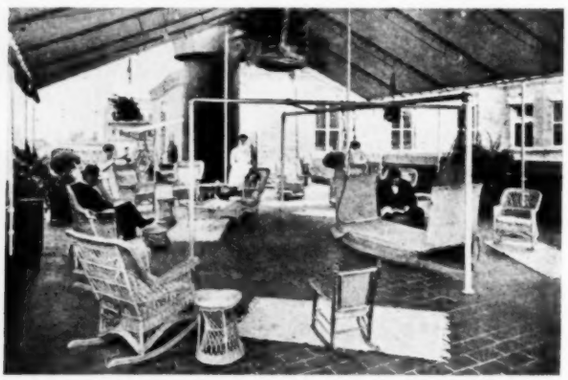

Fig. 24. Jefferson Hospital. Roof garden for private patients.

Bainbridge, and Fitzwater streets. When this group is completed, Philadelphia will have the finest hospital for children in the world. The Children's Hospital cares for children from before birth to twelve years of age. Expectant mothers reporting for attention are given examination, advice, and care. Sick babies and children have the most skillful medical, surgical, and nursing care. The department for the prevention of disease follows up cured patients into their homes, to see that their care and surroundings are such as to prevent a recurrence, and also to see that any well children there are under hygienic conditions. Physical instruction is given for the development of defective children. The dispensary service for out-patients gives relief to all cases not sufficiently serious to admit to the wards.

The Medico-Chirurgical College is situated on the corner of Seventeenth and Cherry streets, and comprises the departments of medicine, dentistry, pharmacy, chemistry, and pharmaceutical chemistry. The present capacity, including the maternity and children's departments, is 310 beds. The clinical amphitheater, with private operating rooms, is adjacent to the hospital on the north side of Cherry street, east of Eighteenth street; its floors and wainscots are of marble, and its construction is fireproof throughout. The seating capacity is about 600. In 1911 a building to be used exclusively for dispensary purposes was erected on Cherry street, opposite the main hospital building, and has spacious and well-equipped rooms for fourteen separate dispensary services in all branches of medicine and surgery, a hall, with a central waiting room, drug room, store rooms, etc. The new maternity and children's departments are situated on the corner of Eighteenth and Cherry streets. In addition to the free wards, there are semiprivate wards and private rooms. The roentgen laboratory occupies the space in the front part of the main hospital building on the first floor.

The Woman's Hospital of Philadelphia has the unique distinction of being entirely a hospital for women and children, officered entirely by women. Organized in 1861 in a private house, it has grown steadily until it will accommodate 200 patients. A somewhat remarkable coincidence is the fact that it is fifty-five years old, there are fifty-five women physicians officially connected with it, and fifty-five nurses in the training school. Organized when women physicians were denied the privilege of attending their patients in the rooms and wards of other hospitals, its object was a threefold one—first to afford a place where women could be cared for by physicians of their own sex; second, to furnish opportunity for women students of medicine to have clinical instruction; and third, to train women to care for the sick. These objects have been faithfully followed ever since its inception.

Pennsylvania Hospital was founded in 1751, and was the first hospital established in America. It was originally chartered by the Provincial Assembly of Pennsylvania to care for the poor, sick, and insane. The original building in which the institution was housed for ninety years still stands at Eighth and Spruce streets. This old building forms 1 percent of the splendid group covering over five acres of ground, and more than 63,000 poor persons have been given treatment within its walls. The principal founder was Benjamin Franklin.

The hospital of the Protestant Episcopal Church is usually called the Episcopal Hospital, and is located in the northeastern section of the city, surrounded by manufacturing and industrial plants. It is a general hospital, has a large dispensary and out-patient service, and takes all except contagious diseases. There is a separate building for the children.

Presbyterian Hospital was founded in 1871, in commemoration of the old and new school Presbyterian

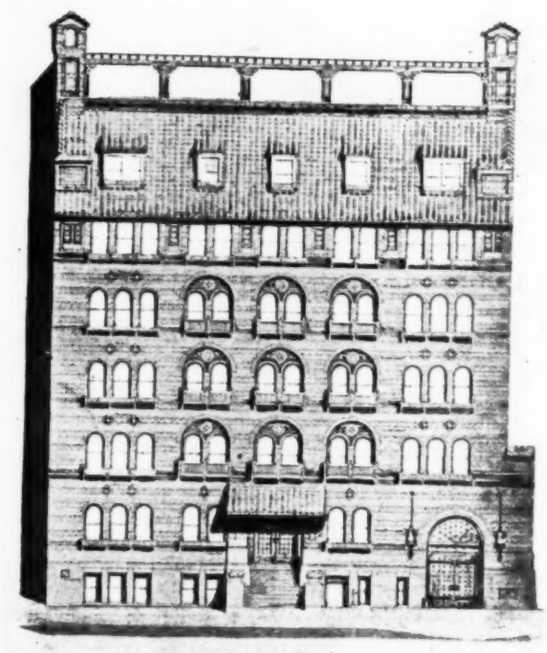

Fig. 25. Hospital of the Woman's Medical College of Pennsylvania. Main building.

Churches. Its government is conducted by representatives of the Presbyterian Church, but outsiders also help with its support. It has 235 beds, and maintains also a home for incurables and a home for convalescents, both of these being situated near Devon, Pa.

Philadelphia Lying-in Charity Hospital boasts of having the first training school for nurses in the United States. It was organized eighty-seven years ago and does an immense amount of free work. It has a social

service conducted under the auspices of an aggressive and active woman's board.

The Hospital of the University of Pennsylvania was founded in 1874 by the late Dr. William Pepper, and is situated on the south side of Spruce street, just south of the collegiate and scientific departments of the university. There are several memorial wings, with a capacity of 450 beds, and there are 130 nurses.

The Hospital of the Woman's Medical College is a teaching hospital connected with the Woman's Medical College. It has 75 beds, and the amphitheater accommodates 125 students. The maternity department has connected with it an out-patient service, administering to poor women in the outlying districts.

St. Mary's Hospital is just completing a new building intended to be one of the most up-to-date and carefully designed hospital buildings in the country. It occupies practically the whole block between Frankford avenue and Palmer, Sepviva, and Eyre streets. The old building is still retained and will continue to house patients.

Chestnut Hill Hospital was organized twelve years ago

Fig. 26. Chestnut Hill Hospital.

by a group of citizens living on Chestnut Hill. It has an aggressive and active woman's board, a large dispensary, an out-patient service, and an enthusiastic medical staff.

Hahnemann Hospital was organized in 1886, and has a capacity of approximately 200 patients. It has an excellent training school, a good dispensary, and an out-patient department.

Mount Sinai Hospital was founded in 1899, and the new building built in 1909 was purposely erected in the ghetto district of the city. The hospital is intended more especially to care for poor Jews of that community.

Rush Hospital has a capacity of 50 beds and the country branch at Malvern 30 beds. Both institutions are devoted exclusively to the treatment of pulmonary and laryngeal tuberculosis.

Jefferson Hospital was established forty years ago, and adjoins Jefferson Medical College, the college and hospital being governed by one board of trustees. The present building was completed and dedicated in 1907.

The Jewish Hospital was founded fifty-one years ago, and last year cared for 2,721 patients, of whom 65 percent were absolutely free.

Philadelphia's Municipal Farm

We wish very much that visitors to the Philadelphia meeting of the American Hospital Association would go out and see Bybury Farm if they can, and, at any rate, have some well-posted Philadelphian tell them all about it.

Bybury is about fifteen miles out in the country, the trip taking one through innumerable old-fashioned toll gates. It contains 1,100 acres of excellent farming land, and belongs to the city.

The farm is in the evolutionary stage, being fitted gradually for the purposes of convalescence. Up to three or four years ago it was conducted merely as a farm—a very good farm, with a herd of fine Holsteins and a new breed of hogs formed of a cross between the large type Berkshire and the English Yorkshire. It had fine meadows, and raised thirty-five to forty bushels of wheat to the acre and seventy bushels of oats, and Philadelphia was proud of her farm. But only 300 or 400 acres were being cultivated because labor was scarce and high.

Three years ago 500 or more harmless insane patients were fretting their lives out in the tiny court of Blockley Hospital, milling about on the worn-out lawn in summer and pacing the wards in winter. Then somebody, not a Philadelphian, suggested that perhaps there was an answer to the farm labor problem in these 500 discontented and unhappy insane, and that perhaps there was also an answer to the discontent of the insane—out on the farm. And something has been done about it—not much, but something, and attendants on the convention will find a most interesting situation, one full of promise for the future.

A TELEGRAPHIC SIGNAL SYSTEM

Cincinnati General Hospital Employs Novel Method for Calling Officials and Interns

A signal system of a kind used in few, if any other similar, institutions in the country has lately been installed by the Cincinnati General Hospital. It consists of a complete telegraph outfit, the exchange, or master key, of which is placed in the main office, and more than two hundred instruments are distributed through the buildings. The same wires are used for the telegraph as for the intercommunicating telephones with which the hospital is equipped, and the exchange is operated by the same person who attends to the telephone exchange. A simple number code is used, and a number is given to each building and department and to each official and intern. By a manipulation of these numbers, individuals may be called and dispatched to the various parts of the institution. No experience in the sending or receiving of telegraphic messages is required to operate the instruments, as no attempt is made to code words, all necessary communications having been worked out in numbers, which are easily understood.

The telegraphic signals are especially advantageous when the telephone fails to work or is in use, but the chief value of the system, according to the hospital officials, lies in the fact that it can be used for business only, and unnecessary conversation need not delay business messages. A similar system has been in use at the Cincinnati Hospital for twenty-five or thirty years.

Dr. Frank H. Holt, superintendent of Michael Reese Hospital, Chicago, died in the hospital of an acute infection of obscure origin on August 3. Dr. Holt went to Michael Reese two years ago from the Boston City Hospital, where he had been assistant superintendent for about twenty-three years. He had made an excellent record at Michael Reese, especially in the physical and financial departments of the institution, and his loss will be keenly felt by those responsible for the conduct of the hospital.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

Butter Versus Margarine. Ed. Hospital, 1916, LX, No. 1560.

The amount of proteid material present in butter, as well as in margarine, is practically negligible from a dietetic point of view. The dietetic experts who condemn margarine rest their claim for the greater value of butter on the alleged but unproved greater digestibility of animal as compared with vegetable fats, and on the admitted presence in butter and absence from margarine of phosphorized fats and vitamines. The experience of medical men in charge of large institutions where the change from butter to margarine has been made shows conclusively that in the vast majority of cases the substitution can be made without any ill effects if a good brand of margarine is used.

The People's Sanatorium Umberto. I. at Prasomaso (Il sanatorio popolare Umberto I. di Prasomaso). Ospedale Maggiore, Milano, 1916, IV, No. 1.

This sanatorium was established by a group of benevolent citizens of Milan, the king of Italy contributing $40,000. The institution is intended to receive poor tuberculous persons of the city and province of Milan. The sanatorium is located on the southern slope of the Rætian Alps, 1,250 meters above the sea. It is well protected from the cold north winds, and a large pine forest forms its northern and western limits. It offers a magnificent view toward the south. The sanatorium consists of a main building devoted exclusively to the patients, a dwelling for the superintendent, and a building for the general services. The main building extends 107 meters from east to west, is four stories high, and is amply provided with terraces for open-air treatment. The sanatorium has room for 168 patients, but, if necessary, can house 176.

Experiments with Rubber Gloves. Dr. Carl E. Block. Jour. Kansas Med. Society, 1916, XVI, No. 6.

The author's experiments were conducted from the standpoint of the interference of the rubber gloves with the tactile function. His conclusions were based on observations of some 144 blind patients who read entirely by finger touch and were dependent on this method for the purpose. Each observation consisted in reading with the finger thirteen lines of Braille text printed on both paper and brass plates, with the following results: 1, reading with bare fingers, average time, 48 seconds; 2, reading with average weight well-fitting gloves, 70 seconds; 3, reading with oil inside the gloves, 68 seconds; 4, reading with gloves placed on wet hands, 65 seconds; 5, average time for reading with gloves under average conditions, 70 seconds. Gloves placed on the hands wet impaired the sense of touch less than gloves put on dry.

The Christiania Municipal Hospital for the Insane at Dikemark, Asker. Dr. H. Holm., Tidsskrift f. d. norske Laegefor., Kristiania, 1916, XXXV, No. 7.

In 1896 the city of Christiania decided to erect a new hospital for the insane. The plans were drawn up after the well-known hospital Alt-Scherbitz, near Leipzig. For the site of the new hospital a beautiful region about fifteen miles southwest of the city of Christiania was selected. In 1905 four pavilions for male patients were completed, and up to 1908 the administration building and four pavilions for women were erected. In 1911 a pavilion for violent male patients and in 1913 one for female patients was completed. At present the hospital has room for 233 male patients and 251 women, but, when completed, the institution will be able to house about 800 patients. The hospital grounds comprise about thirty-four acres. All pavilions have two stories, with a basement and an attic. The buildings so far constructed, with all the equipments, cost 2,181,975 crowns (about $590,000.00), or 4,196 crowns ($1,032) per bed. The article is accompanied by a number of photographs showing the various buildings and a beautiful panoramic view of the whole hospital.

The Hospital Chemical Laboratory. N. W. Janney. Journal of Laboratory and Clinical Medicine, 1916, I, No. 10.

The author urges a greater laboratory development in hospitals. The laboratory directors should be trained in biochemical work, and not chosen from the ranks of physicians bent on a purely clinical career. Newly introduced biochemical methods are becoming ever increasingly such direct aids to clinical diagnosis and treatment that of the total clinical laboratory examinations a large percentage are already chemical. The prevailing type of hospital laboratory seems but poorly prepared to cope with these new demands made on it by biochemistry. In choosing a director it is well to avoid a one-sided view of the situation, overbalanced either in the chemical or medical direction. The successful organization of a hospital laboratory depends much on the director and his ideas. In brief, the physical equipment should be considered in four categories: (1) the chemical laboratory, (2) the metabolic ward, (3) provision for animal experimentation, (4) and library.

The Organization and Management of Children's Hospitals (In argomento di assetto e governo di ospedali infantili). Prof. V. Tedeschi. Rivista di clin. pediat., Firenze, 1916, XIV, No. 3.

The author believes that the mothers should be received and housed in the hospital with the infants. The expenses would not be so much greater as it would at first sight appear, because the number of nurses could be greatly reduced. It would also not be necessary to place each mother with her child in a separate room, except in cases of contagious diseases. For such cases a separate pavilion should be erected, with several divisions for the various diseases, each containing six rooms opening into a common hall, but each division being strictly separated from the others.

For the treatment of lobular pneumonia, Tedeschi holds that every children's hospital ought to be provided with an open-air hall. He has tested this method of treatment and has had great success with it.

With regard to cholera infantum, he finds that it rarely ever occurs among breast-fed children. For artificially fed children he considers it indispensable for every children's hospital to have a pavilion at high altitude, to which such patients can be sent. His extensive experi-

ence has taught him that the sojourn in the mountains is the best possible treatment for cholera infantum.

Dr. Dedeschi has succeeded in interesting the prominent ladies of Padua in his views on the care of sick children. Through his efforts a considerable sum has already been collected and a new children's hospital is to be erected, in which the principles enunciated in his article are to be realized.

What Is a Good Refrigerator? Frances Gable. Good Health, 1916, LI, No. 7.

The efficient refrigerator should be made of mortised oak, and with a choice of three kinds of linings—i. e., spruce, white enamel, or glass. Zinc linings are not only unsatisfactory, but dangerous because of the danger of food becoming tainted with the metal. The best shelves are of heavy plate glass or woven steel wire plated with tin. Dripping pans should be of heavy galvanized steel and seamless. To secure good results, an adequate air circulation is necessary. Food compartments should be made of solid porcelain, and those constructed of thinly lined porcelain or of glass are to be condemned. Of equal importance is good drainage, as the sanitary value of the refrigerator depends almost entirely on the efficiency of the drain pipe.

The Psychiatric-Neurological Clinic in Groningen (De psychiatrisch-neurologische klinick te Groningen). Dr. W. H. Mansholt. Ziekenhuis, Amsterdam, 1916, VII, No. 6.

When the new General Hospital of Groningen was built, it was intended that a psychiatric-neurological clinic should later be added to the hospital. The buildings for this purpose have lately been erected, and the clinic was opened on the first of January of this year. Though built on the grounds of the General Hospital, the clinic is an entirely independent institution.

The clinic consists of two long and narrow three-story buildings, one behind the other, and connected in the middle by covered galleries, so that the ground plan has the form of the letter H. The first or front building is intended for male patients, the rear building for females.

The first floor of the front building contains the x-ray room, the laboratory, a psychological laboratory, the library, and various offices. The corridors extend along the whole north front of the buildings, the sick rooms taking up the southern front. There is room for 120 patients, but there is sufficient space for 140 beds. The building cost 500,000 florins ($205,000), while 80,000 florins ($32,800) were spent for furniture and equipment.

The Solution of Antimony from Enamel Cooking Utensils. Elizabeth W. Miller. Jour. of Home Economics, 1916, VIII, No. 7.

Numerous experiments were conducted by Miss Miller, University of Chicago, to determine the possibility of the solution of harmful substances from enameled dishes in the cooking of foods. Harmful substances which may be present in enamels are lead, arsenic, and antimony. Lead is used in glazes, fired at low temperature because of wide range of fusion, low viscosity, and brilliancy. Experiments tend to show it is used occasionally, but has not a general use. Dishes which yield more than 2 milligrams of lead per liter when boiled for one-half hour with 4-per-cent acetic acid should not be used. Antimony in culinary utensils is forbidden by law in Germany and Austria because of its harmful effects. According to experimental work on some fifteen different dishes, some of standard make, others of a cheap variety, antimony in quantity was extracted in only one case, a cheap gray enamel kettle purchased at a 10-cent store. The experiments tend to prove that only the better grades of enamelware should be purchased, and as a precaution even the best ware should not be used in cooking food containing a high percentage of acid.

The Fiftieth Anniversary of the State Hospital for the Insane at Eberswalde (Zum 50-jährigen Bestehen der Landesirrenanstalt Eberswalde). Psychiat. neurol. Wochenschr., Halle a. S., 1915-16, XVII, No. 27.

The hospital at Eberswalde, in the province of Brandenburg, was erected in 1862-65. It was originally laid out on the so-called block system, with three rows of buildings arranged in a square. The middle row contains in front the administration building, behind it is the church, and still farther back is the building containing the heating plant, machine rooms, etc. On each side of these structures are four hospital buildings. As the population grew, the institution had to be enlarged. First a house for 100 quiet, working male patients was added, then another for 120 female patients of the same class. In 1913 a separate division, consisting of four buildings, for 150 patients of the educated classes was added. These buildings contain a large number of small rooms, with one or two beds. A music room, reading room, etc., with all the comfort to which such person are used, were also established. Another addition was the erection of forty-one dwellings for married male nurses and their families. The grounds were gradually enlarged by the acquisition of neighboring property, so that the hospital owns now 97.85 hectars, of which 77 hectars are used for agricultural purposes.

Vitamines and Bread. Ed. Good Health, 1916, LI, No. 8.

A great deal of attention is being given to the study of pellagra and other food-deficiency diseases. The study on which the report was made was carried on chiefly in Spartanburg county, South Carolina. The reduction of vitamines and the consequential increase in pellagra is laid to three causes. First in importance is the decrease in quantity of vitamine-rich foods ordinarily used, such as milk and fresh eggs, which is due chiefly to increased costs. Second is the introduction of highly milled cereal products, both of wheat and corn, in place of the older process articles, which contained more of the husk and of the kernel of the grain, and was correspondingly richer in vitamines, which difference especially affects the poorer classes, where bread is the chief article of diet. The third factor is the increased use of baking soda in the preparation of bread since the introduction of highly milled flours and corn products. Soda is used to help raise the bread and too often is not combined with any acid, as, for instance, from sour milk. The authors quoted indicate that the alkali seems to destroy the vitamine content of the grain, and thus to render the bread even more deficient in vitamines.

The Emma Clinic in Utrecht. Dr. J. W. T. Lichtenbelt. Ziekenhuis, Amsterdam, 1916, VII, No. 5.

In erecting this new hospital the pavilion plan was entirely discarded and all parts were brought under one roof, but the building is so arranged that the rooms of the service personnel are strictly separated from the sick wards. The hospital consists of a basement, three stories, and an attic. The basement, which is almost completely above ground, contains the rooms for the servants, the kitchen, store rooms, laundry, auto garage, and central heating plant. A dumbwaiter connects all stories with

the kitchen. By a special entrance for the automobiles the patients are transported directly to the elevator, which carries them to the upper stories. On the first floor is the dining room for the nurses, a waiting room, and an x-ray room. Seven rooms are at present occupied by the director and his family, but later a separate building will be erected for him. On the second and third floors are the sick rooms. The smaller rooms are 4 by 6 meters, the larger ones 5 by 7 meters. A corridor 3.75 meters wide runs through the middle of each floor. The attic contains the nurses' rooms. On the south side the roof is turned into a terrace, from which one has a splendid view of the city and which is used as a solarium by those patients who need open-air treatment. The elevator extends upward to this lofty terrace.

Hospital Hints. J. F. Axtell, M. D. Jour. of the Kansas Med. Soc., 1916, XVI, No. 7.

About all a hospital can expect to do is to collect enough money from its pay patients for the running expenses of the hospital and to support its charity patients. It is seldom that anything can be saved for rent or dividends, and, if it could be done, it should go to a fund for more and better buildings and equipment, for hospitals must grow, and more and more people in the future will take advantage of hospital facilities than in the past. Every good town of several thousand inhabitants should organize and maintain a small hospital. The physicians of the town should get together and work together in harmony for their own good and that of the community. There are always enough citizens with civic pride in a town who will give of their money toward such an organization. One or two physicians cannot support a hospital, and therefore it is necessary that all shall work together. In the organization of these hospitals they should not be made private corporations. There should be no capital stock issued and no dividends declared. The money that is used to build these hospitals should be donations, and what the hospital may save in its freedom from taxation, and the surplus, if it should be fortunate enough to have any, can go to charity and for more and better buildings and better equipment.

The Trailer Ambulance. Howard H. Johnson. The Military Surgeon, 1916, XXXIX, No. 1.

The advantages of the trailer ambulance are: (1) low cost; (2) use with the thousands of civilian cars which could be obtained in time of war; (3) simplicity of construction; (4) an ambulance which is not dependent on the whims of one motor for safe arrival at its destination; (5) the possibility of making up ambulance trains drawn by the two-ton truck on the line of communication or elsewhere; and numbers of other excellent points which will develop with practical application. In the trailmobile each litter and seat has the necessary maximum of spring at all times through the arrangement of six spiral springs under the ledges upon which the litter rests. The capacity of three-litter and two sitting-up cases in the trailmobile ambulance can readily be converted to eight sitting-up cases by the use of transverse jump-seats, which may be carried in the bottom of the bed, or by the use of litters as seats. The trailer ambulance can be manufactured quickly and in large numbers at approximately $175. A heavier, more pretentious, and consequently less desirable type will cost over twice this amount. With many points of excellence and adaptability so readily discernible in the trailer, it seems that the time and transportation factors of removal of large numbers of wounded have given way, to a large extent, to the less troublesome ones of roads and mathematics.

The Pennsylvania Workmen's Compensation Act as It Affects Hospitals. William H. Walsh, M. D. The Pennsylvania Med. Jour., 1916, XIX, No. 10.

Prior to the inauguration of the provisions of the Workmen's Compensation Act, a number of the Philadelphia hospital superintendents met for the discussion of the act as it affected the hospitals, and as a result it was decided, for the sake of uniformity, to formulate a schedule of prices to be charged for all hospital cases coming under the provisions of the act. When the schedule had been definitely accepted by the superintendents it was submitted to the trustees of all the hospitals in Philadelphia, many of which have formally adopted it after consultation with their respective staffs. The following is the fee schedule for the treatment and care of industrial accident cases under the state compensation act:

HOUSE CASES

Bed, board, and general nursing (minimum charge, $5), per day	$2.00
Operating room fee	5.00
Ambulance service	no charge
Laboratory examinations (not often needed)	$2.00 to $5.00
Special drugs, serums, vaccines	at cost

RECEIVING WARD AND DISPENSARY CASES

First dressing	$1.00
Subsequent dressings	1.00
Anesthetics	3.00

OTHER FEES

Minor operations	$ 2.00 to $ 5.00
Major operations	25.00 to 50.00
X-ray examinations	3.00 to 10.00
Reducings and dressings—fractures	5.00 to 15.00
Reducings and dressings—dislocations	3.00 to 10.00
Written report at any time as to condition of patient	no charge
Special examination and full report	$3.00 to $5.00

The Preparation of the Patient for Operation. Walter B. Lancester. Journal of the Am. Med. Assn., 1916, LXVII, No. 4.

Dr. Lancaster emphasizes the necessity of a more thorough and systematic consideration of the patient's mind, his body in general, and his eyes in particular. In preparing the patient for an operation the aim should be to "rob surgery of its terrors."

In taking the history of the patient, special attention should be paid to previous operations, the anesthesia, convalescence, complications. If the patient has any idiosyncrasies, it is important to know them. A schedule of a routine examination is given, including observation of the nose and mouth, eyes, lacrimal sac, conjunctiva, skin, and attention is also called to arteriosclerosis and other diseases which might effect narcosis.

The article includes the discussion of various eminent authorities regarding the general procedure of preparation, etc.

Institutional Disposal of Sputum. Ed. The Hospital, 1916, LX, No. 1569.

In dealing with the disinfection of sputum, it is very desirable that a method should be adopted which reduces the handling of cups and flasks to a minimum, and thus the risk of infection to the attendant. Hence it is common to place the cups just as they are collected into a special caldron containing a solution of soda, which is brought to the boil by means of steam. The mixture of sputum and soda solution, after being boiled for twenty minutes, is run off and the sterilized pots thoroughly rinsed in fresh water. Glass spittoons are treated similarly, but are placed first in cold soda solution, their caps being removed and thrown in also; heat is applied more gradually in order to avoid cracking the glass, but otherwise the method is similar.

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DEPARTMENT OF NURSING

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Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Advances in Nursing

As again from all over the country, and in ever-increasing numbers, students flock to the universities, colleges, and schools, it is of much interest to those in the educational field to note the changes, and especially the evidences of progress, in their own particular branch or profession.

In nursing we herald with delight several notable developments. Through Dr. Robert G. Patterson, director of the Division of Public Health Education of the State Board of Health of Ohio, a course in public health nursing is offered under the administration of the Department of Health and Sanitation of the College of Medicine of the Ohio State University. The courses, as outlined in the announcement, together with the opportunities for field work with the district visiting, social service, and other welfare organizations in the city of Columbus, and the close connection with the office of the state supervising nurse, Miss Helena Stewart, cannot fail to give a full return to those nurses in the public health field who avail themselves of this opportunity. We predict that in the near future Dr. Patterson's efforts will be fully repaid.

Not less important than the public health course at the Ohio State University is the establishment by Simmons College, Boston, of a public health nursing department. This progressive step, we believe, is very directly the result of the valuable work achieved by Miss Mary Beard, director of the Boston Visiting Nurses' Association. For some time this association has offered a most excellent practical course in public health nursing, but Miss Beard, her board, and her faculty have felt greatly the need of such academic courses as may now be obtained through Simmons College. The department will be under the able direction of Miss Anne H. Strong, recently instructor of the Public Health Division of the Department of Nursing and Health, Teachers' College, Columbia University, who has received the appointment of assistant professor. Deeply as Teachers' College regretted to lose Miss Strong, the establishment of these courses at Simmons was too greatly to be desired, and under such direction, to permit of any impeding of the consummation of the project. Teachers' College is so fortunate as to have secured as Miss Strong's successor Miss Florence Johnson, a graduate of Smith College and the New York Hospital Training School, and who has had charge for the past five years of the Social Service Department of the Harlem Hospital, one of the municipal institutions allied with Bellevue. Miss Johnson's fine mind, her sound general and professional education, and her deep sympathy and interest in her problem cannot fail to make her a most acceptable teacher.

From Miss Kate Olmstead, supervising nurse of the Wisconsin Antituberculosis Association, comes a letter appealing for a wider conception of and a better preparation for the great new field of public health nursing, together with a tentative outline of a post-graduate course in public health work for nurses under the Wisconsin Antituberculosis Association, with the cooperation of the extension department of the University of Wisconsin, and the various public health agencies and associations in Milwaukee.

The Western Reserve University of Cleveland, Ohio, has recently taken over the public health nursing course of Cleveland, formerly given by the Visiting Nurses' Association, and placed it under the School of Applied Social Science, one of the new schools of the University. The university will have charge of all the field as well as the academic work. It will also be responsible for the course of lectures in public health nursing given to the senior nurses in several hospitals. Miss Cecelia Evans, of the Cleveland Visiting Nurses' Association, a former student of Teachers' College, holder of an Isabel Hampton Robb Scholarship, has been appointed director. Miss Evans has been conducting with much satisfaction to the students the public health courses for nurses at Teachers' College during the summer session.

The rapid development of these courses in public health work, and the ever-increasing number of nurses who are availing themselves of them, give promise in the near future of the highly prepared and efficient health army which the country so greatly needs, and of which it will have reason to be proud.

Some Educational Problems of Mutual Interest to the Physician and the Nurse[1]

BY RUDOLPH MATAS, M. D.,
Professor of Surgery, Tulane University of Louisiana, New Orleans, La.

It was my fortune to have begun my professional career just when the first abortive attempt was made to inaugurate a training school for nurses in this city at the Charity Hospital in 1880, during the administration of that progressive physician and citizen, Dr. Daniel C. Holliday, and during the house surgeonship of my honored friend, Dr. A. W. de Roaldes, whose clear vision and courageous efforts to meet the needs of that big hospital were not rewarded with the success which they deserved. It took a lapse of fourteen years (1894) before the much abused and censured attitude of these pioneers in regard to the nursing question and their far-seeing judgment were vindicated and confirmed by the establishment of the present training school at the Charity Hospital. A better fate attended the efforts of the New Orleans Polyclinic, now the Graduate School of Tulane University, and, as one of its founders and first teachers, I am glad that I participated in the foundation of the first successful training school for nurses, established in this city on the site of the New Orleans Sanitarium, on St. Joseph street, in 1889, and now continued as the Presbyterian Hospital. The school was organized under the auspices of a number of prominent, progressive, and public-spirited ladies, headed by Mrs. William Muller, whose numerous enterprises in the interest of charity and philanthropy are still gratefully remembered. The Touro Training School for Nurses then followed through the energetic efforts of the distinguished house surgeon, Dr. Frederick Loeber, after which the Sisters of Charity at the Hotel Dieu inaugurated their school in 1899.

[1]Read by invitation at the twenty-sixth annual meeting of the National League of Nursing Education and of the American Nurses' Association, New Orleans, La., April 27 to May 3, 1916.

And now we see that from these comparatively recent beginnings fully 1,100 nurses have been graduated from these and a few other institutions, of whom probably 890 are now officially registered as graduate nurses on the records of the Louisiana State Board of Medical Examiners, 547 of whom are practicing in the city alone. And it is not only in numerical expansion, but in the changed attitude of the community, in the recognition of the trained nurse as a necessary and indispensable element in the social welfare, that we must consider the progress of the nursing movement, especially in a community as conservative as ours, as a marvelous accomplishment; but it is in the still more phenomenal transformation, during the same brief period, that has taken place in the nurse herself, not only in education and training, but in her new and multiplied relations to the community, that the nurse's rapid advancement must compel our respect and admiration. From what was a most elementary beginning, in which the mere physical aptitude and moral ability of a nurse to become a trained attendant on the sick—whose place in the educational program gave her vocation a mere occupational position—to the present standards of her education and the prerequisites for admission to the best training schools, we must realize that she has been lifted by leaps and bounds to the ranks of a highly differentiated profession. I remember quite distinctly how in speaking to nurses, not so many years ago, I was embarrassed in choosing between the words "occupation," "vocation," and "profession" as applied to nursing. I also found it difficult to speak of a nurse's education as synonymous with her training. When we consider the qualifications required now of women admitted to the best training schools, and of the curriculum that is mapped out for them in the three years of their training, also the elevated character of the teaching they are given at the post-graduate schools, especially at the Teachers' College of Columbia, there is now no longer a question as to the proper use of the word "profession" as applied to a nurse's vocation; and when we understand the difference between the words "train" and "educate" as your distinguished teacher, Miss Isabel Stewart, would apply these terms (in her discussion last year on the "Ideal Nursing School"), we must unequivocally admit that the modern nurse is educated as well as trained for her profession.

As medical men we must recognize that the evolution and history of nursing as an art and science has followed very closely on the rise and development of medical education in this country. The only difference is, as pointed out by that acute and thoughtful observer, Miss Sophia Palmer, that you have covered in forty-nine years practically what it has taken the medical profession 135 to accomplish. The quicker pace with which nursing progress has been accomplished, as compared with medical progress, is easily understood when we consider that nursing is only a comparatively recent and, perhaps, the youngest offshoot of the Hippocratic tree, and that nursing, growing under the protecting shade of medicine, has not only profited by the vigorous sap of the parent trunk, but has enjoyed the constant protection of its dense and umbrageous foliage.

Nursing schools have multiplied in the same lawless way as medical schools, and in the same way have been commercialized. We all recognize the utilitarian as well as humanitarian development of nursing in this country. When the training schools were first established, they were started purely from the hospital utilitarian standpoint, and not from the nurse's point of view; not always with the idea of making nurses as they are today, but for the purpose of realizing urgent necessities. But all this is now happily changing and for the better; the hospitals are considering the nurse's problems from an entirely different and generous point of view, and in this pressing reform the nurses' organizations are doing more than their yeoman's share of work. Organization has been the great compelling force in rectifying the faults of the pioneer period in nursing, as in medicine. The same evolutional forces working for betterment have operated on both in the same way; only nursing, as the younger organization, has profited by the example and expansion of the older. The pioneers laid the foundation for the present high edifice of medical education, and have raised the ethical efficiency of the doctor to a level that would have seemed chimerical and an unattainable dream but a few years ago. So the pioneers of the nursing world have laid a foundation upon which the nurse of the future will build—if we interpret aright the spirit which guides your present tendencies—to a superb and commanding profession. And all this is the fruit of organization. The National League of Nursing Education, beginning as the Training Schools' Superintendents' Association, was organized in 1893, and now numbers 500 individual members or more and 13 state league affiliations. The American Nurses' Association was established in 1897, and now has a membership of over 30,000, the graduates of over 1,600 training schools. The course in nursing and health at Columbia was opened in 1900 and has graduated more than 200, quite a number of whom have this year received college degrees. State legislation leading to the creation and establishment of the Board of Medical Examiners, for the proper licensing and registration of duly qualified nurses, began in 1903, and now covers forty-two states of the Union. The National Organization for Public Health Nursing was organized in 1912 and already numbers over 1,500 members. In this way a sharp line of cleavage has been drawn between the trained and the untrained, or, better, the educated as well as trained nurse and the qualified and the unqualified. State registration is now well established. In this state we have the good fortune of possessing a board composed of earnest, zealous, and intelligent officers, who are vigilantly watching the opportunities for advancing the educational requirements of applicants for admission in the nursing schools. Up to the present it has not been possible to demand a higher qualification than the eighth grade of public school teaching, but next year the first year of high school will be demanded as a necessary prerequisite of all applicants. State registration is not to be regarded as a sort of high intelligence office, but a bulwark to efficiency as expressed in educational standards. Then there is the army nurse corps, and there is also a navy nurse corps, with all that these institutions mean, for the protection and care of the soldier and sailor in time of war. The most encouraging and important detail in organization history is the growing relationship between the nurses' national and state societies and the national and state societies of the American Red Cross. And this is especially emphasized in speaking of the Red Cross nurses, the trained nurses, who are everywhere aiding the surgeons on the bloody battle fronts of the present fearful European conflict; in the army hospitals and camps of every one of the belligerent countries, where the surgeon and the nurse are incessantly at work, side by side, in the labor of mercy. One of the few encouraging and redeeming features of the present world war is that, while at no time the forces of destruction have drawn more prodigally from the intelligence and inventiveness of man and from his command of the physical and chemical sciences in order to effect their destructive aims, never before have the same scientific agencies been called on to yield their secrets more lavishly in the effort to conserve and preserve life. Just as there

never have been so many millions of men engaged in the destruction of their kind, so do we contemplate the armies of men and women who are utilizing every agency by which suffering may be assuaged and life spared. The war has also demonstrated that of all the professions, those of medicine and nursing occupy an almost unique relationship to warfare; that among all the citizens of a country at war, medical men and women, including in this category the nurse, occupy a peculiarly distinctive and humane position. No discovery in the medical sciences has been utilized to destroy or harm an enemy. Medical men and women in each of the warring countries are as courageous and patriotic as other citizens; they are as ready to die or to be crippled for life in the service of their country as any other class of their fellow countrymen—but with this difference, that they willingly make these sacrifices in ministering to the sick and to the injured, and in providing for their sanitary needs (Meltzer). Every day we read in the modest columns of the medical press of the unheralded acts of heroism of the surgeons and their helpers on the firing line in their efforts to recover the wounded and bring them to places of safety in order to attend to their immediate needs. In each one of the belligerent countries the number of graves that mark the last resting place of the medical heroes of this devastating war can already be counted by hundreds. In these heroic and humanitarian acts friend and foe are treated alike. Whatever may be said of the inhumanity and barbarity of the war, no one can say that the doctor and the nurse have failed in the discharge of their duties or have been deaf to the call of a common humanity. If any class of people can help to restore the bonds of human fellowship, which at present appear so hopelessly and utterly shattered by the excesses and atrocities of the present conflict, it is the doctor and the nurse. As well put by Miss Hulme, the British delegate to your convention at San Francisco, last year, "When the dawn of a new day breaks, and when peace and charity are again restored, then we trust that the sisterhood of nursing (like the brotherhood of medicine) may be one of the surviving bonds that will once again unite the nations of the world."

From what has been said it is evident that the nurses have been unceasing in their efforts to better themselves and to elevate their professional standards, and that they have done so by the most systematic and intelligent methods of organization. In this upward movement they have met, however, with innumerable difficulties, arising chiefly through their efforts to adjust themselves to the continually growing and changing demands of modern medicine; they have felt the constantly growing stimulus and importance of the multitudinous specialties into which medicine is being rapidly differentiated. In addition, they have been sensitive and responsive to the growing complexity of social conditions, which have come to alter the popular, and even the professional, concept of the nurse's mission and training.

As long as the conservation and welfare of human life were the main consideration—the direct ministration to the sick—in its simple and primitive form, it was possible for even women of the most elementary instruction to discharge the nursing functions acceptably. This is a concept of the nurse which is fast vanishing in the mists of the past, and will soon remain only as a relic in history and tradition. Today it is universally admitted that the best interests of society are conserved and advanced by a much higher type of woman; one who acts, as Miss Isabel Stewart puts it, "as a scientifically trained assistant to, not the servant of, the physician or the sanitary expert, one who is fitted to lead in certain important branches of social work." The distinction in the aim of the older methods of a nurse's education and that of the present is fundamental; it is the difference between a training for a more or less skilled handicraft and the training for a profession. As my distinguished friend, Dr. Dock, also puts it: "The nurse is no longer a mere maker of beds, administrator of medicines, a soother of pain, just as the doctor is no longer a mere maker of pills and potions. She has become the eyes and the hands of the doctor in hundreds of details besides the elementary function of pulse counting, temperature taking, and medicine giving. The more learned and expert the doctor, the more can he and the patient profit from the accomplished nurse. The nurse cannot do her duty without also taking part in the essential features of the doctor's work, the prevention of disease, the conservation of health, not only in the abstract but in every patient cared for. Then, just as the doctor is compelled to specialize, the nurse, too, often finds it proper and necessary to limit herself to certain lines to perfect herself in certain details. But she cannot avoid going to still other lines of work. From her training, she now becomes a chef, a housekeeper, a manager of an asylum, sanatorium or other great institution in which executive and administrative capacity is especially required; she becomes a school nurse, a health inspector, a factory or sweatshop nurse, milk station manager or assistant, insurance nurse, anesthetic nurse, operating room nurse, hydrotherapist, clinical laboratory assistant, social service expert; a charity aid organizer, the organizer of complex and extensive movements in times of war, flood, pestilence, and other calamities."

But, in addition to this expansion into innumerable specialties, there are several influences at work within the old familiar branches which put a greater demand on every nurse. The increased elaboration of technic, the radical change in the conception of disease, the methods of treating it, as we see in the cases of yellow fever, typhus, malaria, typhoid, pellagra, uncinariasis, etc., in which the sanitary as well as the therapeutic knowledge of the nurse is made to serve new concepts of the cause and transmission of these diseases, are well developing new duties. All these, unknown to the graduates of the earlier schools, and many other developments, have called for a revision of the curriculum in preparing the nurse of today and tomorrow.

Granting that all the numerous specialties which we have mentioned are vastly expanding the domain of the nursing profession, and making it more attractive to the great mass of educated and desirable women, it is still a question how the hospitals and the training schools can adjust themselves to the new and difficult demands put on them. The problem presents itself in two ways—how is the curriculum to be arranged so that the matriculates, once accepted, may be given the benefit of the most systematic and logical instruction in the fundamentals; and, secondly, how can they be best prepared toward the end of their hospital and school term, so that they may be given elective courses if they choose to adopt as their final objective any of the specialties in executive or administrative work, public health, social service, teaching, etc.? This evidently can be done only by the establishment of central schools, or, still better, by an alliance of the training schools which already exist with universities, where all the preparatory, as well as elective or post-graduate, instruction may be given most conveniently and advantageously. The importance and urgency of this problem is well reflected in the reports of your collegiate committee, in the papers of Miss Louise Powell (Trans. 1895, p. 107) on "Existing Affiliations Between Training Schools and Uni-

versities," and in Miss Sophia F. Palmer's excellent paper, "On the Power of the Professional Press" (Trans. 1915). This need of the complete reorganization of the method of training nurses has been apparent to all of us as medical men, as it has been to Miss Palmer and to all your great leaders for many years. In 1912, in an address to the Touro nurses, I advocated the establishment of central schools, or, preferably, affiliation with the universities, and I am glad to observe that she has taken up the question independently with her accustomed vigor and intelligence. She believes in the establishment of simple schools for the preliminary and the theoretical training of nurses, where candidates shall be prepared in all the departments which do not require actual hospital experience, thus relieving the hospital of all responsibility of training, with the exception of all those things that require actual administrative experience; where pupils from all hospitals, large and small, general and private, and for the insane, shall receive the same preparation, just as the physician is prepared for a medical school by an adequate term of service in the hospital before the granting of a diploma by the college and a certificate of registration by the state. In this way not only the ideals of a nurse's training could be more surely realized, but the administrative and hospital staff, as well as superintendents, would be relieved of a grave and burdensome responsibility, which is, at best, and with the most sincere intentions, most inadequately discharged. At the present time the superintendent of a nursing school is already overburdened with her own legitimate hospital duties—economic, administrative, disciplinary, and social—to permit her to discharge continuously and efficiently the duties of class-room instruction.

While in the discharge of her administrative duties as superintendent in the larger hospitals she is aided by some of her equally hard-worked assistants, she is helped by the doctor of the staff, who take time they can ill afford for gratuitous teaching, and yet who are expected to discharge their duties with the punctuality of regularly paid instructors. Those of us who have taught in training schools know how cheerfully and willingly the medical man is ever ready to aid and cooperate in the training of a nurse; but we must also admit that, in spite of our good-will, this work is most unsatisfactorily performed, often in a way just as unsatisfactory to the instructor as to the instructed. It is unreasonable to expect a busy doctor to refuse an interesting and remunerative out-of-town consultation rather than put off an important lecture, which, when postponed, plays havoc with a closely regulated and scheduled course of study. And yet a superintendent can scarcely be so ungracious as to remonstrate against this attitude to one whose favor and good-will is essential to the welfare of the hospital with which she is connected. But the greatest objection is that the corps of lecturers and teachers of training schools are most often themselves tired men, whose energies have been sapped and exhausted by the routine of their day's labor by the time that the bell rings for the discharge of their teaching duty to their pupils. On the other hand we, who have taught, best understand how difficult it is to impress the mind and to absorb the attention of the weary brain of the unfortunate pupils who must sit down at attention at the close of a twelve-hour day of the most strenuous and trying physical, as well as mental exertion at the bedside. The remedy for this unfortunate state of affairs is plain enough. It is for the nurses themselves and their leaders to secure the cooperation of the superintendents of the training schools and of others in control of their education, and to apply to the universities and to medical schools and ask these to establish departments for the training of nurses which shall be empowered to grant a degree such as that of "Graduate in Nursing," as is conferred by the University of Minnesota and other institutions of learning. To bring about such a complete change, Miss Palmer believes that "the public must be educated, the hospital, the medical public." She seems to apprehend greater difficulties in the accomplishment of this purpose than are now apparent to me, but she has in view the establishment of independent central colleges, endowed by the state or by private subscription, which, of course, would be a very different matter from securing affiliation as a department in a fully equipped and established university. If this step could be accomplished, you would have done more to bring your profession abreast of ours than has been done in all the decades that you have traveled since the Reverend Theodore Fielder founded the historic home for the Deaconesses at Kaiserwerth.

But this is no idle dream; this ideal method of educating nurses is not only a possibility, but a tangible reality, demonstrated by the success of the well-established Waltham School for Nurses in Massachusetts; by the success of schools for nurses with preparatory courses at Science College, Boston; Drexel Institute, Philadelphia; the Toronto Territorial School, the Kansas State Agricultural College; by the universities of Michigan, of Iowa, of Virginia; Washington University, St. Louis; and George Washington University, of Georgetown; and by that most complete and typical model of the nurses' colleges, the University of Minnesota, in 1909. I should not fail to mention the nurses' training schools attached to the universities of Indiana, of Missouri at Columbia, of North Dakota, and last, but not least, the Teachers' College at Columbia, established in New York in 1909. All of these apparently recent creations present different types of organization, different curriculums, and variable conditions for admission, but they all agree in the collegiate character of the work, and, with few exceptions, in the high standards required for matriculation, and especially in the fact that a responsible university is back of the school and back of the education given to its nurses, just as it is for its teachers, doctors, lawyers, engineers, etc.

I agree with Miss Powell, from whose excellent report in the Transactions of 1915 I have quoted many of these references, in saying "our universities all over the country, especially those supported by the taxes of the people, owe it to the public that they should take a hand in the training of so important a public servant as the nurse is getting to be."

I am satisfied that if a carefully digested plan for the establishment of such a school were submitted by the authorities most nearly concerned in this problem to the president of Tulane University or to the dean of the Medical School, such a proposition would be given earnest and sympathetic consideration.

In all that I have said I have dwelt largely on the benefit of organizations that have for their aim the betterment and the uplift of the nurse and the increased happiness of womankind as well, and for this reason I am a sincere advocate of your local, state, and national societies. I have also been thoroughly converted to the view that the nurse's function is no longer a merely specialized occupation, a vocation, or an art, but that it is a profession, with all the attributes that go with it; and, having advocated this much, I can accept no other view of the nurse's preliminary qualifications than those which befit and are necessary for the proper understanding and exercise of a dignified professional life. For this reason I am in hearty

sympathy with your efforts to secure the best educated women, the high school graduate and the college graduate, as the most durable material with which you are to build the great social edifice that is represented by the nursing world, and that is to stand as one of the greatest accomplishments of the twentieth century—the professional trained nurse.

Among the problems that are still awaiting solution, the great needs of your guild are: that all training schools for nurses in America shall adopt uniform standards for matriculation and graduation. You need a reform in the length of the practical hours during the period of training; you have thoroughly considered this subject, and we all must agree that eight hours of direct practical work, instead of twelve hours, is not asking too much. You need, urgently, a society corresponding to an insurance company adapted to your peculiar needs and that shall protect you in the days of misfortune and infirmity, which come soon enough to the most devoted and best of you; you need a careful investigation and careful survey of the new specialties that are now multiplying at a prodigious rate, and that are being coupled with your profession, in order to determine their true relations to a nurse's education. Some of these are so far removed from the original purpose contemplated in the nurse's curriculum—such as clinical, chemical, bacteriologic and pathologic laboratory assistants, anesthetists, and radiologists—and, in fact, are so removed from the original purpose of a nurse's education that they cannot be considered as integral parts of it by the longest stretch of the imagination. They only serve to embarrass and clog the curriculum. There is plenty of room for all these specialties, and they offer admirable inducements to the highest class of educated women, as they do to properly qualified men, and no one is more heartily in favor of interesting properly qualified women in these branches than myself, but the best training schools or post-graduate schools cannot fit women for them unless the nurses are satisfied to be relegated to the mere role of helpers and subordinates under the supervision and control of their fully licensed employers. Medicine offers the best opportunities to properly qualified women who wish to enter these thoroughly differentiated specialties. It gives them not only a dignified work, but opens the doors for an independent and remunerative existence. Anxious as I am to see the best intelligence and culture seeking admission into the nursing world, I feel that, in the zeal to secure the best material, courses will be opened to nurses or inducements offered them which are in no sense related to their proper calling, and which can only tend in the end to disappointment and unhappiness. The question of financial and social compensation for the great sacrifices in money and time that are involved in obtaining high academic and collegiate qualifications is undoubtedly a great bar to many eligible and desirable women who would otherwise seek admission to your ranks. No one has presented this important phase of the nursing problem better than Miss Isabel Stewart in her admirable analysis of the reasons why so large a majority of high school and college graduates fail to consider and recognize the opportunities offered by nursing as the life work of an educated woman. I fear that in her report she has failed to lay stress on one important reason, a practical business reason, which has been admirably presented by Miss Ruth Sherman in her excellent paper on "Education and the Earning Power" (American Journal of Nursing, March, 1914). The advantages of the trained nurse's career from the practical business point of view furnish abundant food for reflection, and, to my mind at least, is one of the obstacles to be overcome, more urgently even than those presented by Miss Stewart in her impressive report of the vocational guidance committee last year at the San Francisco meeting. It is indeed a matter for the serious attention of your excellent collegiate and publicity committee, who by its past efforts has shown extraordinary ability to cope with existing difficulties. The committee is most competent to deal with this undoubtedly grave obstacle to the enlistment of the desirable college and high school graduates in your ranks. When adequate compensation and independent livelihood—not only financial, but social and professional—shall be found for the high school or college graduate, the difficulties now in the way of enlisting their interest in the nursing profession shall cease as if by enchantment, and no publicity committee will be required to advertise or urge the advantages of the nursing profession.

Another problem, which is one of the greatest interest to the nursing and the medical profession, is the proper nursing of the great middle class of people. Your thoughtful president, I am glad to observe, devoted a considerable part of her presidential address to this vital subject at the St. Louis meeting. Her suggestions are timely and wise, but, for obvious reasons, still leave this much controverted question in the same state of doubt and uncertainty as it has been in past years. It seems to me that the only solution to this problem lies in a proper classification and grading of nurses according to their different capacities and special qualifications.

These, and many more, are the problems which mutually interest the medical profession and the nurse. I have merely skimmed over the surface of some of these without attempting, or even hoping for, their immediate solution. All that I could hope to do tonight was to show how much your problems concern us and how we doctors must join hands with you in the effort to overcome the difficulties in the way of their solution. In this rambling talk I have far exceeded the limits I had originally assigned myself. I trust you will indulgently interpret my trespass solely as an evidence of my enthusiasm and good-will in the success of your great cause. In this connection I am reminded of a recent story told by a speaker who was placed in a similarly apologetic position. President Hadley, of Yale, when asked by the speaker how long he should talk, replied, "That is at your discretion, but there is a tradition here that no soul is saved after twenty minutes."

I fear that the hands of the clock have long passed the salvation point, and I can only hope for my salvation through your benevolent and generous intercession. At the risk of forfeiting further claims on your indulgence, I cannot leave without a final word of personal and heartfelt appreciation of the great good your splendid meeting has accomplished, and how I, as one of the senior members of the medical profession of this city, feel that I can most cordially voice their sentiments in renewing the invitation, with the hope that you may come to us soon again, and often.

Plans have been prepared for a hospital to be erected at Mandan, N. D., for Dr. A. F. Schierbaum and Dr. H. A. Brandes, of that city. The building will be two stories high above a basement, and will occupy a ground space 30 by 87 feet. On the first floor there will be five private rooms, two wards, private office, waiting room, dressing room, operating room, x-ray room, rest room, and sterilizing room. The second floor will have ten private rooms for patients and nurses and one ward. In addition to the heating plant, the basement will contain janitor's quarters and kitchen. The cost of the building, exclusive of equipment, is expected to be about $15,000.

SOCIAL HYGIENE
VENEREAL DISEASES

Conducted by WILLIAM F. SNOW, M. D.,
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Opinions on Sex Education

It may be fairly claimed that education in sexual physiology and hygiene conduces to health and physical morality by inculcating the ideal of a clean mind in a sound body, and by teaching that the reproductive function is given for a higher purpose than mere sensual gratification—that it should be restrained by reason, regulated by self-control, and exercised in the legitimate way imposed by marriage. I hold it to be a cardinal sin against youth to deny them that knowledge which would safeguard them against ignorant exposure to dangerous infections, the existence of which many of them do not realize and the significance of which none of them fully comprehends.

This education, to be salutary as a safeguard, should be given in youth, for it is at this period that the foundations of the sexual character are laid and habits of mind and practices are formed, which, in a great measure, determine the future sexual life of the individual.

PRINCE A. MORROW, M. D.,
Founder of the Society of Sanitary and Moral Prophylaxis; First President of The American Federation for Sex Hygiene, now The American Social Hygiene Association.

In its educational propaganda, however, the association will necessarily proceed conservatively and gradually. It recognizes the obvious fact that it is quite impossible, even if it were advisable, to introduce instruction in social hygiene into the public schools, except to a small degree, and with great reticence. It believes that instruction in sex subjects should never be given to the two sexes together after the age of puberty, and that none but obviously high-minded teachers should even talk with pupils on these subjects. It believes that parents, if adequately informed, are the best persons to teach the elements of parenthood and sex relations to their children.

It means to carry on its work without impairing modesty and becoming reticence in either young or old, and it hopes to promote, by all its activities, genuine innocence and purity, and the sanctity of family life.

These being its objects and aims, and its conception of public service in the field of social hygiene, the association invites men and women in every part of the country who are of this mind to become members of the association, and to support its work.

CHARLES W. ELIOT,
President Emeritus of Harvard University; President of The American Social Hygiene Association.

In view of the sudden and general discussion of this topic, it should be understood that cautious progress is alone to be recommended. Sex education in schools is a new thing, and there has been very little actual experience with it either in Europe or America. Mere knowledge of functions is not likely to govern conduct. Character development must accompany information. The entire subject must be handled with the utmost delicacy and in a distinctly experimental spirit. No general class-room instruction is, at this stage, to be recommended on the basis of successful experience anywhere. Personal conference with younger children, tactfully conducted by parents and teachers, seems the most feasible procedure.

ABRAHAM FLEXNER,
Assistant Secretary General Education Board.

Sex education should be understood as including all scientific, ethical, social, and religious instruction which aims to help young people prepare to solve for themselves the problems of sex which inevitably come to every normal individual.

For emphasis, let me briefly summarize these aims of sex education: (1) serious, scientific, and respectful attitude of mind on sex questions; (2) personal sexual hygiene; (3) social, ethical, and eugenic responsibility for sex actions; (4) relation of immorality and social diseases. I have deliberately placed these educational aims in this order because it is the order of greatest permanent importance in the sex education movement, it represents the greatest value to the largest number of individuals who may learn the scientific truth, and it is the order most natural, most logical, and most effective in pedagogical practice with young people.

THE QUESTIONING CHILD
He asks about and learns the laws of
FIRE
"What makes the fire burn?"
and of
GRAVITY
"What makes the cup fall?"
These intricate laws are explained to him in a simple way
BUT WHEN HE ASKS
"Where did the baby come from"
He is told not FACTS but FABLES

Fig. 1.

We should stand for the scientific instruction of all young people in matters concerning sex because it is certain that such knowledge will function completely in many lives and will work appreciable good in many others.

Sex education deals with problems which the normal human life cannot possibly avoid and which each individual must be prepared to solve for himself. Therefore, we may confidently assert that instruction concerning the most important aspects of sex processes and relationships has come to stay, and that it will soon be recognized as an

absolutely necessary part of a rational and efficient scheme for the education of young people.

MAURICE A. BIGELOW,
Professor of Biology Teachers' College, Columbia University.

The situation as to sex instruction emphasizes, among others, two things:

1. It emphasizes the need of making adequate provision for the training of teachers to give such instruction. All normal schools should provide it, and all colleges and universities should organize courses in their departments of education in which the subject may be thoroughly treated in the light of a broad background of knowledge of biology, physiology, sociology, and ethics.

2. It emphasizes the necessity of providing instruction at public expense in this subject, as already pointed out, for parents. This is the most effective way to create a public sentiment which will support any form of such instruction which experience may prove to be effective in elementary schools.

One of the most important results of sex education, in the case of adults as well as of children, is the giving them a decent vocabulary in which to discuss the subject of sex and sex hygiene. The terminology picked up in the street is the only terminology with which all but educated adults are familiar, and it is the only vocabulary which children hear who get their knowledge of sex from impure sources. The terminology of science is the only terminology that is free from indelicate associations, and the very first condition of success in sex discussion, either with young people or with adults, is to give them a vocabulary free from these associations.

THOMAS M. BALLIET, PH. D.,
Dean of the School of Pedagogy, New York University.

We must endeavor to find an adequate and efficient means of imparting to the child at suitable times in his development such revelations of the sexual life as will conduce to his normal knowledge and control of himself as the need for that control arises. The difficulties are great of arousing unduly the mind to dwell on the subject, of causing needless alarm or depression, or of overstimulation. Nevertheless the risk is worth taking, and better a year too early than an hour too late.

Certain general principles underlie the presentation of sex instruction by teachers:

1. It should present normal relations rather than the pathological, the sane and happy and not the diseased and abnormal.

2. It should be constructive and positive in plan, and not critical and negative. It should aim to build up and conserve those normal inhibitions of reserve, modesty, chivalry, and the normal allegiances of lovers, husbands, and wives, and of parent and child. It should say *do* and not *don't*.

3. It cannot be divorced from moral and ethical motives, and might well be strengthened by religious ones also.

These considerations make it at once evident that in the whole field of ideas, ideals, standards, and philosophy of life inculcated by instruction in the child, all teachers of the school have some part. Literature, art and history contribute ideas, and establish ideals of the right and wrong relations of the sexes. Language has words with sexual relations; mathematics and grammar develop the sense of relations; manual training, domestic science, and athletics fill the hours and the mind, as well as train hand, muscle, and nerve to normal, healthful functions; the sciences all inculcate in the mind of the child the idea of nature ruled by law. It is thus possible for every teacher to contribute something toward a sane mind in a sound body and a mind not morbidly saturated with sexual ideas, but normally and naturally cognizant of some of the highest ideals of the relations of the sexes before and after marriage.

It would seem to the writer that, in so far as possible,

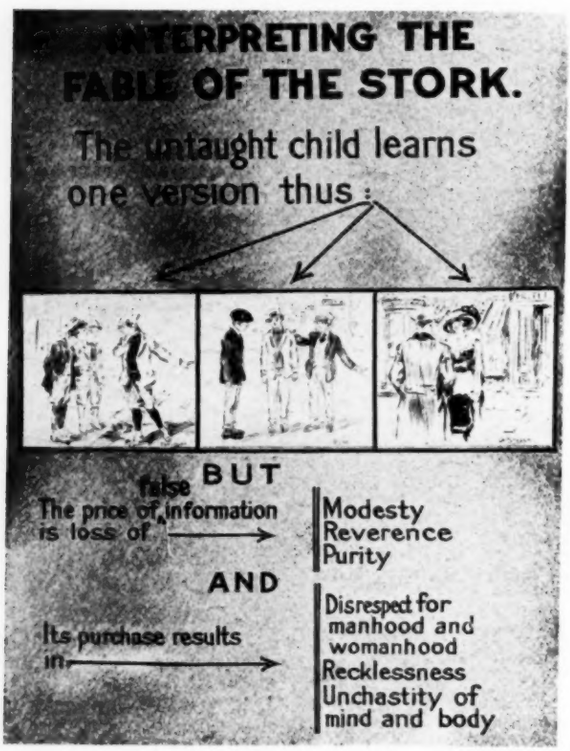


Fig. 2.

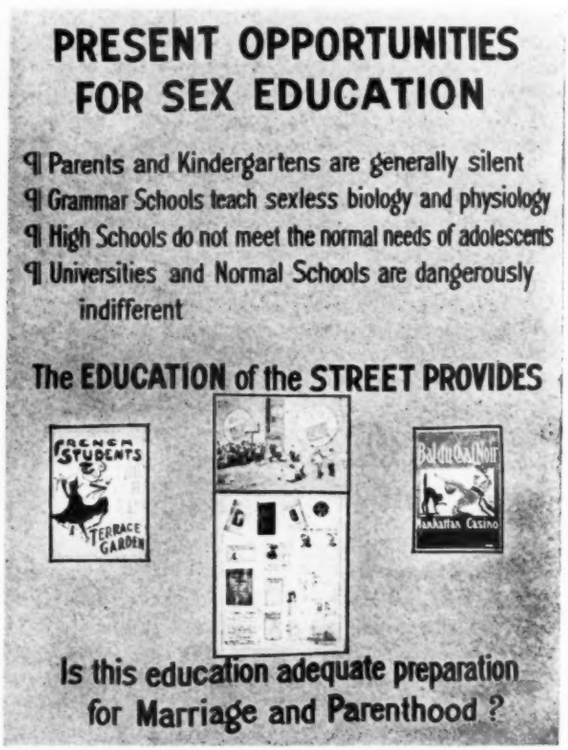

PRESENT OPPORTUNITIES
FOR SEX EDUCATION
¶ Parents and Kindergartens are generally silent
¶ Grammar Schools teach sexless biology and physiology
¶ High Schools do not meet the normal needs of adolescents
¶ Universities and Normal Schools are dangerously
indifferent
The EDUCATION of the STREET PROVIDES
FRENCH STUDENTS
TERRACE GARDEN
Is this education adequate preparation
for Marriage and Parenthood ?

Fig. 3.

the subject of sex and sex relations should be treated casually and incidentally whenever possible in normal connections in all subjects where ideals, duties, and standards can be emphasized, and that it be robbed of its malodorous secrecy with all the discretion possible.

C. A. KOFOID, PH. D.,
Professor of Zoology University of California.

The educational phases of social reform are of most immediate importance. Nothing can so profitably occupy the attention of social hygiene societies as the education of the public. If groups of social workers come to serious disagreement on other phases of the present emergency, if the discussion of restricted districts, minimum wage laws, health certificates for marriage, and reporting of diseases divide the group into warring camps, all can unite in favor of spreading certain truths as widely as possible; and it is not difficult to agree on at least a few of the many methods which have already proved effective in educational campaigns.

WILLIAM T. FOSTER, PH. D.,
President of Reed College.

But the elimination of disease and prostitution cannot be attained solely by the enforced registration of venereal diseases, the raiding of disorderly houses, and the enactment of laws against procuration and solicitation.

The real strength of the social hygiene movement of today lies in the cooperative activities of the great religious, social, and educational organizations. They are striking the evil at its source; not by driving the prostitute into the street and then out of it again, but by preventing our young girls from becoming prostitutes, and our young men from preying upon them. This they hope to achieve by informing the mind so as to banish prurient curiosity, by diverting the imagination to emotions joyous and clean, by exercising the body in playgrounds and dance halls that are safe, and, above all, by inspiring the soul with the highest religious and family and civic ideals. To turn lust into love, "into the enthralling love of mate for equal mate, into civic love for freedom, home, and state, into the eternal love of God and of all things create"—such is our aspiration.

EDWARD L. KEYES, JR., M. D.,
President of the Society of Sanitary and Moral Prophylaxis.

The question of teaching sex information in the public schools is on the firing line, and no one can say what may or may not be wisely given. Experience has generally shown little to be gained by forcing legislation in advance of forming public opinion. Similarly, history shows the same observation to be applicable to attempts to introduce, by legislation or otherwise, the compulsory teaching of physiology and hygiene in the public schools in advance of training teachers in these subjects. It is the consensus of opinion that sex education is necessary, and that the chief part of such instruction must be given by others than the parents, but it does not follow that the schools can immediately do this work. Ultimately this subject, like all important subjects of education, will find its place in the public school curriculum through distribution in the various scientific and ethical courses adapted to its purpose, and in well-planned special lectures by experienced educators. In the meantime, patience is necessary. Here and there well-planned efforts are being made and should be observed closely. Good work should be promptly recognized and encouraged, but Mr. Abraham Flexner has well said, "Swapping absolute ignorance for misinformation will avail the people little." Much of the educational effort of the day accomplishes only this result.

WILLIAM F. SNOW, M. D.,
General Secretary The American Social Hygiene Association.

DEPARTMENT OF LIFE EXTENSION

The Medicine Habit

BY EUGENE L. FISK, M. D.,
Director of Hygiene Life Extension Institute, Inc.

For a young and supposedly vigorous and healthy nation, our drug bill is enormous. If the quantity of medicine a citizen takes is any index of his physical condition, then this nation needs to take thought of the stamina of its people. A drug-taking nation is no stronger than a drug-taking man, and a drug-taking man is not very dependable, either in the factory or on the firing line.

Five hundred million dollars is the estimated expenditure for drugs in this country, most of which are self-administered. Into the delicately adjusted machinery of the human body is yearly poured at least 75,000,000 pounds of drugs and chemicals, haphazard, with no real knowledge on the part of the users of what the mess is going to do to that machinery.

We have cold cures, headache cures, consumption cures, cancer cures, liver pills, kidney cures, spring tonics, blood purifiers, ague cures, rheumatism cures, cures for everything except the credulity and physical neglect that make possible this enormous expenditure for drugs that are in the vast majority of cases useless when they are not harmful.

Since 1880 the expenditure per capita for patent remedies consumed in the United States has risen from 33 cents to $1.54. That the health of the nation has deteriorated to the degree suggested by these figures seems impossible, but they are in line with other evidence suggesting that national vitality is waning in later life, and that chronic disease, which is most likely to induce the taking of patent remedies, is on the increase. It is safe to say that most advertised remedies for chronic disease are actually harmful in such conditions. Take kidney cures for example: if they have any effect at all, it is that of stimulating the action of the kidneys, of overworking a diseased organ instead of resting it, as can be done by proper diet. Physicians are now very cautious about giving remedies that have any specific action on the kidneys.

Liver pills (they don't act on the liver) are usually distinctly harmful in the conditions for which they are taken —sluggish bowels. Once a liver pill taker, always a liver pill taker, is the rule. A condition which often can be readily corrected by proper diet and exercise is thus rendered chronic and sometimes almost incurable by remedies advertised to relieve it. Biliousness is a "bugaboo." Bile has nothing to do with the "dopey" feeling that has been given the name.

Legislation has done something to mitigate these evils and prevent to some extent extravagant claims for these ready-made remedies, but the enormous development of advertising methods has contributed to put into the public mind this widespread suggestion for drug indulgence. Not everybody who takes patent remedies is ill. But few people have such superabundant health that they are not willing to take a chance on being made a little better if

it can be done so easily—just a teaspoonful or tablespoonful three times a day, or just a little pill after each meal.

One of the absurd customs in this grand drug debauch of the nation is that of taking "spring medicine." The ingredients of most spring medicines are for the most part inert and useless flavoring matter, such as sarsaparilla. Unfortunately, such remedies often contain a heavy percentage of alcohol and are to that extent injurious. There is no physiological need of spring medicine, but there is often need for hygienic precaution as external changes in the weather prevail. People who are overdressed all winter naturally feel lanquid when the first warm days come. Proper clothing habits will prevent much "spring fever." Those whose bodies are poisoned by overfeeding or sluggish bowels, or whose nervous systems are depressed by lack of sleep, by alcohol, or other unhygienic indulgence, naturally feel the depression of the early warm days and may be tempted to the drug counter for tonics, liver regulators, blood purifiers, etc. Not the least harm that such vaunted remedies do is to deter the individual from seeking the advice of a physician or correcting the faulty living habits which are usually responsible for the "out of sorts" feeling.

If you think you have ague or malaria, go to a physician and have your blood examined, and, if quinine is needed, he will intelligently govern its administration. Enormous quantities of quinine are annually consumed in this country—about 2,000,000,000 doses. Much of this is not needed, and much of it is harmful, while in many cases it would accomplish great good by intelligent administration.

If you think you have anemia, or that your blood is disordered, do not make the diagnosis from a patent medicine circular, but have your blood examined. If there is anemia, the physician may order an iron tonic, but he will rely more on fresh air and proper exercise and food for real results.

Another misuse of medicine supposed to be beneficial, or at least harmless, is the taking of mineral waters. There is a suggestion of nature's remedy in a mineral water which makes a strong appeal. Waters that are not purgative or laxative sometimes do good simply because they contain water, which may be greatly needed. Often water from the hydrant will prove just as effective if taken regularly and with confidence that it will do good. Purgative and laxative waters, if taken regularly, tend to inflame the bowel, and the same applies to "salts." Fortunately, such simple remedies as agar agar and mineral oil are coming into use and displacing the absurd array of pills and purgatives which have been so much abused. Mineral oil is not entirely without possibilities of harm. If taken several times a day after meals, it may interfere with the digestion and absorption of food. If taken late at night, it is less likely to do harm. The main reliance for this intestinal laziness should be proper diet, bulky green vegetables, whole cereals, bran water between meals, fresh air and exercise, and in some cases bowel irrigation.

The enormous sale of headache remedies is another illustration of our inability as a nation to bear pain. It is so easy to take a pill or powder, and away goes the headache! But the effect is produced by drugs that weaken the heart. The common use of such remedies may cause serious heart affections, besides masking the underlying conditions that are the real cause of the headaches, such as eye strain, head infection, intestinal absorption, or even serious organic impairments, which the use of headache remedies only aggravates.

One of the most dangerous and widely abused remedies for headaches, often taken in conditions where the heart and kidneys have been weakened, as after alcoholic excess, is bromoseltzer. In some of the leading hotels "quarter-in-the-slot" machines are placed in the bath rooms with packages of this remedy, along with some exceedingly useful and hygienic articles, as tooth paste, tooth brushes, and razors. Bromoseltzer is heavily loaded with a coal-tar product. It is unsafe for anyone to use except on a physician's prescription, and it is in the class of habit-forming drugs. Sleep-producing drugs, such as veronal, bromides, sulphonal, trional, are also to be avoided, and never taken except on the advice and prescription of a physician. In many cases headaches can readily be relieved by proper hygiene, by rest, by abstinence from food until intestinal poisoning is corrected. A cold compress on the head, rest in a dark room, or rubbing the forehead with a menthol pencil or menthol salve will often relieve a headache, and the patient is invigorated and restored, while the use of a headache powder would simply bring depression and some form of injury that cannot at the time be measured or appreciated.

Another fertile source of revenue for those who prey on the sick and half-sick and the gullible are rheumatism cures. Genuine rheumatism is caused by infection, by bacteria that travel through the tissues. Liniments are merely palliative; they cannot "cure" such conditions, and lithia, so widely advocated, is of no value. Rheumatism is not due to uric acid, and most remedies advertised for such conditions are useless, if not harmful. The source of the infection should be sought, whether in the tonsils, tooth-sockets, ears, nose, etc., and the focus of infection removed.

When simple remedies do not relieve pain, we should seek trained medical assistance. Instead of spending money for remedies which our common sense should tell us are mere catch-pennies, we should spend more time and money in avoiding illness. One visit a year to the physician for keeping well may save many visits for actual illness. It costs less to "keep well" than it does to "get well."

The Porter's Beer Is Gone

An old custom that may be regarded as doomed has now been discarded at Worcester Infirmary, England—that of supplying the head porter and his assistant with beer. The change made last month took the form of the following resolution, which was agreed to on the recommendation of the house committee: "That increases of salary be given to the head porter (W. Bateman) and the assistant porter (W. J. Vaughan), the former to have £45 a year instead of £40 and the latter £24 instead of £20." Everything is found for both officers, including one suit of uniform, except beer. Mr. Park, who presided at the meeting, said that it is no longer the custom to supply the staff of institutions with beer, and he proposed its discontinuance. In reply to questions, Mr. Park said that the committee preferred to regard the increase as not in lieu of beer, though that is what it amounts to. The discussion is worth recording as a minor event in hospital history—the passing of the porter's beer, an event at one time that would have sounded incredible.—The Hospital.

Plans for the $100,000 central emergency hospital, which the city of San Francisco proposes to erect, call for a two-story structure of reinforced concrete, containing wards for thirty regular patients and twenty persons suffering from mental derangements. There will be a court room for the disposition of the latter, as well as operating rooms, administrative offices, etc.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The Recent Cornell Meeting

The Home Economics Association held its annual meeting at Cornell University, Ithaca, N. Y., June 28 to July 2. There were two sessions of interest to dietitians.

The institution section gave the following program Wednesday, June 28: "Students' food service at a dormitory table"—Elizabeth Goodrich, Simmons College, Boston. "Psychology of dainty food for students"—Bertha Shapleigh, Teachers' College, Columbia University, New York city. Discussion, "Problems connected with students' food"—Isabel Ely Lord, Pratt Institute, Brooklyn, aided by Alice Loomis, University of Nebraska, Lincoln; Anne D. Blitz, dean of Women, William Smith College, Geneva; Mary Uri Watson, McDonald Institute, Guelph, Canada. "Organization of service in a new cafeteria"—Blanche Geary, accounts and finance, Y. M. C. A., New York city.

The program of the science section included several papers of especial value to the dietitian who is doing work in metabolism. The meeting offered an excellent opportunity for us to find out what others are doing, and this program was unusually helpful: "The digestibility of starch as affected by various processes of cookery"—Amy Louise Daniels, University of Wisconsin; "Practical ways of increasing the iron content of the diet"—Caroline L. Hunt, office of nutrition investigation, Department of Agriculture, Washington, D. C.; "Standardization of cooking temperatures"—Louise Stenley, University of Missouri; "Recent contributions to knowledge of mineral metabolism"—Grace McLeod, Pratt Institute; "The new dietetic treatment of diabetes mellitus"—Lena F. Cooper, Battle Creek, Mich.; "Recent contributions of bacteriology to the home"—Josephine Kerr Allison; "Creatin and creatin excretion"—Emma B. Wagner.

Miss Daniels exploded some of the theories which many have long held with regard to digestibility of the starch grain as affected by cooking. She stated that they found the percent of undigested starch in pancakes was no greater than in bread. This is contrary to the belief of the majority of people in the past and is a surprising fact. She said also that they found crackers varying greatly in digestibility, some of them being not at all suitable for infants.

Miss Hunt, of the office of nutrition investigation, Washington, D. C., modified her subject to read, "Practical ways of increasing the iron content of the diet, if that seems desirable." She gave us chiefly of her personal experience in using a diet containing 30 milligrams of iron and furnishing but 1,800 calories of energy, whereas the ordinary 3,000 calories diet contains but 15 milligrams of iron.

Miss McLeod's paper was full of information given in a most interesting manner. It would be difficult to mention any particular part of it, as one would want it all in order to get the successive steps and relations in our "present" knowledge of mineral metabolism.

Miss Cooper gave a most simple and comprehensive description of the most recent method of treating diabetes. She mentioned the difficulties as well as the advantages. Anyone could readily understand the treatment, whether they were or were not familiar with the ordinary methods or details of the disease.

The other papers were equally good, but not of such specific interest to the hospital work as were those mentioned. It is to be hoped that the science section and the dietitian section may be combined and their programs made out with that end in view another year.

Round tables and business meetings were held, at which considerable interest and enthusiasm were shown by the dietitians in regard to forming a permanent national organization. Then, too, there seems to be a need for some way of distinguishing the various types of dietitians. We have the hospital dietitian, the school dietitian, the dietitian in charge of cafeterias and lunch rooms, and there is just beginning to be a demand for the consultant dietitian. In each of these lines the work is different, and the preparation as well as qualifications of the dietitian in each case should be quite different. Much confusion exists, not only in the schools offering courses for dietitians, but also among the people who are employing people in these various capacities.

Interest in Dietetics

It is much to be regretted that those who are interested in dietetics and dietotherapy have no publication in which their problems may be discussed, or through which they may learn what is being done by others in the same field of endeavor. The medical profession has so recently recognized the value of diet in disease that nothing yet accomplished is considered final. During this period of development new decisions are constantly being formed and results of various experiments are being discussed. This department will be more than pleased to publish anything of this nature which is of general interest.

If you have some method of service particularly helpful, will you not tell us about it? If you have found some book of special interest, or some piece of equipment which has met your needs particularly well, will you not share it with the rest of us? In the July and August numbers of THE MODERN HOSPITAL we have had the privilege of learning something of what is being done in one of our largest hospitals and in one of our large factories. I am sure we have all been glad to know what Miss Eckman and Mrs. DuGuay have told us, and we shall be equally glad to know what others are doing.

At the national convention at Cornell the question arose, "What can the dietitian do for the dispensary patient?" Her duties are too numerous for her to give any time to this work herself, yet the physicians in the dispensary are calling on her frequently for help. In a few hospitals a consulting dietitian is employed, but these are very few as yet. The nurse, in her regular course, does not get sufficient training in dietetics to enable her to be of much help, and the visiting nurse is no better equipped. If any of our leaders are meeting this problem in a way that is satisfactory, or even partially so, we should be glad to know about it.

A few things of significance to our readers have occurred during the summer, and we are calling attention

to them in a brief way this month. The annual convention at Cornell was attended by a few of the dietitians of the country, who indicated an ambition to promote the interest of all of us. It is to be hoped that this meeting will gain in popularity to such an extent that a wider section of the country may be represented.

The exposure of the Westfield movement is gratifying to some of us who have felt all along that it was purely an advertising scheme. The decision in regard to corn syrup should mean much at this season, when the price of sugar is so high.

"The Westfield Standard"

The town of Westfield, Mass., has been basking in the sunlight of popularity which it acquired through the activities of Lewis B. Allyn. The town itself had no part in bringing about this popularity other than the passive state of its board of health. No pretense was made by the town to have either the scientific knowledge or equipment to establish a standard of pure foods.

Mr. Allyn, however, has been advertising very widely the "Westfield Standard," not only in printed matter, but by traveling about the country holding pure food exhibitions and giving demonstrations of pure food products. Through the efforts of Senator Sheehan, who represents the senatorial district in which Westfield is located, an investigation was begun, which soon brought to light the falseness of the "Westfield Standard."

The August number of the *American Food Journal* gives an account of the investigation, which offers evidence in proof of what it says. A few paragraphs from this article will tell the story very well.

"This advertising scheme found its way into a syndicated list of ninety newspapers throughout the country, where it was run for about twenty-six weeks, and this false doctrine spread accordingly.

"The American Chemical Society, at its meeting last month, unanimously reported on this Westfield proposition as among those movements which are 'altogether wrong in principle and opposed to the best interest of the public,' one reason being because 'almost without exception profiting financially by means of advertising is directly connected in one way or another with such campaigns. The movements are, therefore, not disinterested.'"

"The reports made by the chemist of this board, Lewis B. Allyn, refer to the large amount of work done by the board because of the examination and the determination of the admission of food articles to these lists. Other literature shows that a large number of these lists have been distributed or sold for cash, the claims varying from many thousands to nearly one million copies so distributed. Other literature claims that these lists contain practically all food products that are pure, clean, and wholesome, which naturally implies that practically all food products have been examined by this board and that those not listed are not pure, clean, and wholesome. The facts and information show that this so-called Westfield Standard is only a name given to a preferred list of foods. The foods so listed have not been examined, as is represented, by any scientific test by the Westfield board of health. The method adopted for listing these foods will be disclosed later.

"The Westfield board of health has neither the laboratory facilities nor the employees qualified to make the necessary examinations, nor the money with which to carry out the extensive investigations which should be made in order to ascertain that all the food articles listed comply with the requirements of the alleged standard. It could not have made the necessary investigations to certify that all the foods in the list were 'packed and sold under sanitary conditions,' for such investigations would have cost millions of dollars, and this board, with its three members and six employees, spends only about $7,000 per annum.

"If he possessed a laboratory equipped for a full and complete analysis of food products, one might be misled into a belief that he knew what he was talking about. But Dr. McLaughlin, the commissioner of health of Massachusetts, reported to Senator Sheehan that the laboratory of the Westfield board of health, in which it is claimed 'Professor' Allyn made his thousands of analyses, contains only 'a Babcock machine, a balance and dishes for the determination of solids and fat in milk, a sediment tester, a still, not yet set up, for the distillation of water, and glassware. The board expects to have a more substantial laboratory in the future, as $125 has been appropriated for this purpose this year.'

"The man whose verdict is the last word as to the quality of the goods submitted to him knows nothing of pathology, toxicology, or pharmacology, a knowledge of which sciences is necessary in determining the effects of food substances on health, and his knowledge of chemistry is confined to what he has learned at the State Normal School at Westfield. He has never been honored with a degree of 'Doctor' of anything, and he has no right to the title 'Professor.'"

Yet thousands of people throughout the United States have been doing their marketing from the list of manufacturers named in the book published by Allyn, and feeding their families only the "pure products" named in his publication. No doubt these people have been eating pure and wholesome food—there is no condemnation to be given on that score—but there are other products on the market which are quite as pure, though they were not on the "approved" list.

Wheat Flour and Other Flours

BY GEORGE L. TELLER, M. S., Chicago, Illinois.

[Continued from the August issue.]

The lower grades of flour contain more of the outer portions of the wheat berry than do the finer patent flours. For this reason they contain more ash and more protein than do the higher grades of flour. If there is any truth in the contention that the fine white flours contain too little mineral matter and too little protein, it would seem that anything which would overcome the objection to the lower grades of flour as to color would be welcomed by those who are continually urging the defects of white flour because of the lack of mineral matter in it.

It is a well-recognized fact on the part of those who manufacture and use flour that flour from freshly milled wheat has disadvantages both as to color and baking qualities which are overcome by the use of suitable bleaching processes, and millers, by these processes, are enabled to keep their flours more uniform throughout the year, as well as to give a better product to those who use flour. It is true that these conditions improve in the flour with age, but from a commercial standpoint there are many objections to waiting several months after a flour is produced before it can be put on the market and consumed. It requires space for storage, there is danger of injury from animal and insect life, and there is the tying up of a large amount of capital, the interest of which must necessarily increase the cost of the product to the consumer. There is no question that some of the bleaching processes which are in use do materially age and mature freshly milled flour, and at the same time enable the user of the flour to make a better, more attractive, and more wholesome product. No one is injured by its use and no injurious material is put in the flour, and, on the whole, it would appear to be an advantageous and commendable practice.

Wheat flour is the most common bread flour of the greater part of the civilized world, and has attained its place largely because of its peculiar physical characteristics, which make it suitable for producing fermented bread. This peculiarity in physical characteristics lies in the insoluble coagulable proteids, commonly known as gluten, and which gives the well-known characteristics to the dough. The amount of gluten in wheat flour varies in

extreme limits from 5 to 17 percent, the average amount being in the neighborhood of 10 percent. Flours which depart materially from this average amount are likely to give trouble to those who use them, partly because of the common lack of information as to how such flours should be treated and partly because a gluten content somewhere around this quantity appears to be best suited for producing those articles for which wheat flour is used.

From a standpoint of food value and nutrition, wheat flour is not necessarily superior to the flour or meal of other grains, several of which have substantially the same composition as wheat flour. Each of the individual grains has a distinctive flavor peculiar to itself, and thus we can tell by the taste and smell of the flour whether it is from wheat, oats, rye, or Indian corn. Among the American people the flavor of wheat flour appears to be the favorite, although in some sections of the country many of the people are fond of corn bread, and in others people, especially those of some recent European descent, are partial to rye bread.

Rye flour, like wheat flour, may be obtained in the market in several different grades, depending on the manner in which it has been separated in the mill. Here the flours are designated as white rye, medium rye, dark rye, etc. The white rye corresponds somewhat to the straight grade of wheat flour; the dark rye contains even a larger proportion of bran than is ever found in any of the wheat products used for food purposes. Botanically considered, rye is more closely associated to wheat than are any of the other grains used as food. Chemically considered, the wheat flour and rye flour are very similar, but no gluten can be obtained from rye flour in the manner in which it is obtained by washing wheat flour, and the dough is physically of a different character, being more sticky and less rubbery. For these reasons rye flour, by itself, does not make bread which is as porous as that from wheat flour. To overcome this difficulty, it is a common practice to blend wheat flour with the rye flour, the wheat flour being used in various amounts, but seldom equaling in quantity the rye flour used. Rye flour in this country is used largely because of its flavor, which is pleasing to some, but less so to others. In some European countries, especially in Germany, rye bread is extensively used because it is cheaper than white bread. Generally speaking, the amount of protein in rye flour is considerably less than the amount in a similar grade of even the soft wheat flours. The wheat flour commonly used for blending with rye flours in bread-making is of the lower grades—often the first or second clear.

Oat flour is seldom used in this country, the form in which oats are used for human food being that of rolled oats or some form of the so-called "steel-cut" oat meal. The oat product thus produced consists of the entire grain after it has been freed from the husk, which adheres closely to it in its normal condition. Oat meal of all kinds is comparatively rich in both fat and protein, and is an exceptionally valuable food product when used in the form of porridge.

Barley flour is seldom produced in this country. The favorite form in which barley is used here as a food is pearl barley. Barley flour is, however, imported from Europe and sold in the drug stores by the pound at a price approximating $50 per barrel. The material sold in this way has, approximately, the same composition as a straight grade of soft wheat flour, and the food value of the barley flour is about the same as such wheat flour.

Buckwheat, while not a cereal, yields a flour which is extensively used for food purposes, but usually in this country in the form of griddle cakes. It has a food value approximating that of rye flour.

Indian corn, or maize, is the one cereal which is native to America, and has been used here as a food product ever since we have a record of any kind.

Corn, like wheat, has three distinct parts—the outer coating, the germ, and that part of the kernel which produces flour.

In modern processes of milling the outer coating is removed as bran, and the germ is also very completely separated from the remainder of the kernel. The germ of the corn is very rich in oil and in protein. When the entire kernel is ground into a meal, the oil has a tendency to become rancid, so that the meal, as produced, has very poor keeping qualities.

Corn flour freed from the bran and germ contains somewhat less protein and fat than an average straight grade soft wheat flour. It contains no adhesive gluten, and for that reason does not make a light, porous loaf of bread like that from wheat flour. The bread made from it is generally not fermented. The food value of corn flour approximates closely to that of soft wheat flour. The protein and fat in it are readily digested, and the starch which makes up the greater part of the remaining material is also readily digested, after the flour has been baked into bread, just as is that in wheat or rye bread. Corn flour is more extensively used for food purposes in this country than in Europe because its value for this purpose is much better understood here than there, and the taste for it appears never to have been acquired by the people of that continent as it has been by people in certain sections of America. No bread from the mixture of corn flour and wheat flour has ever been developed in this country, in which corn flour constituted the greater part of the material, as in the case of rye flour. This is apparently due to the fact that the dough from corn flour does not have the adhesive property of that from rye flour, and does not lend itself so readily to the making of a loaf of raised bread. Corn flour and other corn products are used to a greater or less extent in the making of wheat bread, and there is no reason why they should not be used to a much larger extent if proper means were taken to introduce their use.

During the latter part of the last century corn flour was blended with wheat flour to a large extent in various parts of the country and the blend was sold as wheat flour. Marketed in this way, the produce was a most flagrant example of misbranding and a fraud on the consumer. At that time no adequate pure-food laws were in force in either the several states or in the United States. To remedy this condition, a special act of Congress was enacted, which, due to the breaking out of the Spanish-American War, was incorporated in a revenue measure, and which stipulated that the sale of flours produced by blending products of corn or other cereals with wheat flour must be made under the rules and regulations of the Internal Revenue Department, except when the amount of wheat flour is less than 50 percent. Later, when the revenue law to which this new amendment was attached was repealed, the taxes and restrictions on mixed wheat and corn flour were allowed to remain, and up to this time have not been repealed. The tax is not great, but difficulties connected with the carrying out of the revenue provisions has curtailed much the sale of flour of this kind. A bill is now before Congress which would remove this revenue feature and bring this product under the supervision of the pure food officials. This new bill provides

for the labeling of the product as "mixed flour," giving the percentages of wheat and corn flour, or other flours which are used in the mixture. This would seem to be a wise thing, especially when the cost of living is increasing so rapidly and when any means of reducing this cost should be carefully sought out.

It is the practice of the millers all over the country to blend wheats containing different quantities of gluten in such a way as to keep the amount of gluten constant in the resultant blend; that is, a flour containing a large amount of gluten is blended with a flour containing a small amount of gluten and consequently a larger proportion of starch. The starch of the softer flour is, therefore, used to reduce the proportion of gluten of the stronger flour. To do this the flour must be supplied at wheat prices, which are considerably higher than the price of corn and other materials which may be used for this purpose. This is because it costs more to produce wheat than to produce these other grains. If corn flour or corn starch were used in the blend instead of the softer wheat flour, the cost of the resulting product would be materially reduced, while its bread-making and nutritive qualities would be the same. Not all flours are suitable for blending in this way, but, from a standpoint of economy, those that are should be so treated.

Bread flours naturally contain more gluten than flours which are used for pastry or crackers, so that different kinds of flours are required for different purposes, and for many purposes mixed flour, consisting of wheat flour and corn flour or wheat flour and corn starch, or wheat flour and the products of certain other cereals and seeds, would be preferred to a wheat flour, which would contain too large a proportion of gluten. It is to the interest of the country, as a whole, and especially to the consumer, to use mixed flours when they are of such a nature as to serve the purpose for which the flour is wanted and when they can be obtained at an appreciably low cost. Since mixed flour is necessarily labeled as such, showing the kind and the proportion of the ingredients used, no one is required to use it unless he sees fit; on the other hand, he should have the privilege to do so when his intelligence dictates this to be the correct course.

Tasty Desserts and Beverages

The mixing of cool and nutritious beverages for sick and convalescent patients during the hot summer months is a problem that confronts the hospital dietitian. Not only must the dietitian consult the physician regarding the requirements of each individual patient, but she must observe all esthetic laws. A beverage, although cool and tasty, if served in a sloppy way, or the glass bears the Bertillon system of finger prints, had best remain unserved, as it will neither appease the thirst nor satisfy the mental attitude of the patient. In no department of the hospital does psychology play so great a part as in the preparation of foods and beverages. A bit of green mint, watercress, or parsley gives a tasty and esthetic appearance to the side dish or glass, and the nurse or dietitian who observes and practices this fact will secure the everlasting gratitude of the sick patient and the convalescent.

Recently a New York hospital caused to be printed and distributed to all nurses a small cloth-backed folder measuring, when folded, 2½ by 5 inches. This small folder contains many good formulas, giving the amounts of carbohydrates, fat, and proteids in grams, and also the calories of a number of summer drinks and delicious desserts. The contents of the folder consist of the following formulas:

FORMULAS FOR DESSERTS AND BEVERAGES

Food formulas	Amount	Carbohydrate, in grams	Fat, in grams	Proteid, in grams	Calories	Calories per ounce	Ways of serving
1. Milk	8 oz.	12	9.5	8.4	160	20	Hot or cold, or as junket.
2. Milk	6 oz.	9	6.5	6	120	.....	Hot or cold.
Cream (40 percent)	2 oz.	1.8	2.4	1.5	240	45	Flavored with tea or coffee or cocoa. As junket.
3. Milk	6 oz.	9	6.5	6	120	.....	As iced drink.
Cream	2 oz.	1.8	2.4	1.5	240	60	Flavored with tea or coffee or cocoa.
Lactose	1 oz.	30	.....	.....	120	.....	Flavored with vegetable or meat as soup. Flavored with vanilla or chocolate.
4. Milk	6 oz.	9	6.5	6	120	.....	To be used as iced drink with brandy or whisky.
Cream	2 oz.	1.8	2.4	1.5	240	.....	Cooked as custard or made into ice cream (sweetened).
Lactose	1 oz.	30	.....	.....	120	70	As hot soup, flavored as above.
Egg	1	.....	5	7	80	.....	
5. Orange juice	4 oz.	12	.....	.....	48	12	Preferably ice cold.
6. Orange juice	4 oz.	12	.....	.....	48	.....	Serve as iced drink or frozen as water ice.
Egg	1	.....	.....	.....	80	.....	
Lactose	1 oz.	30	.....	.....	120	30	
Vichy or water	4 oz.	.....	.....	.....	.....	.....	
7. Cereal (cooked)	5 oz.	.....	.....	.....	120	.....	
Cream	2 oz.	.....	.....	.....	240	.....	
Lactose	1 oz.	.....	.....	.....	120	65	
Cane sugar	¼ oz.	.....	.....	.....	30	.....	
8. Bread or toast	50 gm.	25	.....	5	120	.....	Slice 4 by ½ inches thick, 50 gm.
9. Milk toast	.....	.....	.....	.....	.....	.....	Add steaming milk as desired.
Bread	50 gm.	25	.....	5	120	.....	
Cream	2 oz.	1.8	2.4	1.5	240	.....	
Lactose	1 oz.	30	.....	.....	120	.....	
Butter	10 gm.	.....	8	.....	65	.....	1-inch cube.
10. Baked apple	1	18	.....	.....	75	.....	Sugar to taste.
Lactose	1 oz.	.....	.....	.....	120	.....	
Cream	1 oz.	.9	1.2	.7	120	.....	
11. Jelly	.....	.....	.....	.....	.....	.....	Flavored with beef, wine, or fruit.
Gelatin, q. s.	.....	.....	.....	.....	.....	.....	
Lactose	1 oz.	30	.....	.....	120	.....	
Cane sugar	1 dr.	8	.....	.....	15	50	
Water, q. s. ad	5 oz.	.....	.....	.....	.....	.....	
Cream (whipped)	1 oz.	.9	1.2	.7	120	.....	
12. Potato (medium)	3 oz.	32	.....	3.5	90	.....	
Butter	10 gm.	.....	8	.....	65	.....	1-inch cube.
13. Crackers	3-10	70%	.....	.....	12-40	120	Each kind must be weighed in fractions of ounce.

INDUSTRIAL WELFARE

Employees' Service Department

BY RUPERT BLUE, D. Sc., M. D., D. P. H., Surgeon General United States Public Health Service, Washington.

There can be little doubt that there is need for efforts to improve the working and living conditions especially among the unskilled and low-paid group of wage-earners. But, owing to the objections on the part of many employers as well as employees to the term "industrial welfare work," there appears to be an increasing demand that these departments be reorganized and placed on a basis that will make them of greater service, and not viewed with suspicion by employees as measures devised by employers to stabilize their labor supply.

Since there has arisen considerable prejudice against the term "welfare work," it is suggested that the term "employees' service department" be substituted in its stead, and that these departments be reorganized on a basis of joint ownership and control by those responsible for working and living conditions—i. e., employers and employees.

In order to accomplish this under our present organization of industry, it is suggested that the following general principles be embodied in the organization of these departments:

1. MEMBERSHIP.—All employees should be entitled to the benefits of the employees' service department. If there is a very decided health hazard for some of the employees, they should be classified according to the departments in such a way as to segregate (for purposes of contributions) the extremely hazardous occupations, or otherwise they should be classified according to wages.

2. CONTRIBUTIONS.—a. The employees' contributions should be a fixed amount or a certain percentage of the wages, depending on the benefits to be provided. The contributions should vary according to the amount of expenditures from year to year.

b. Employers should contribute a sum equal to that of the employees, or, at the lowest, one-half as much. In the case of low-paid workers or especially hazardous occupations, the employers' share should be increased in a reasonable proportion. To induce the employees to become members of the department, employers might vary their contributions from one-half of the total amount of the contributions of their employees when less than 50 percent of them are members up to an equal amount when 90 percent or more are members.

c. Contributions of employees should be deducted from the pay roll by employers, and, together with the employers' contribution, should be paid to the treasurer of the department monthly.

3. BENEFITS.—The benefits should be such as may be decided on by the members, whether hospitals, visiting nurses, loan associations, clubs, or benefit funds for sickness, invalidity, old age, and the like. It should be understood, however, that insofar as practicable, the benefits should be in proportion to the contributions.

4. ADMINISTRATION.—a. The control should be divided between employers and employees according to proportion of contribution.

b. Officers. (1) Board of directors: employer directors to be appointed by employer and employee directors to be elected by employees, the number representing each to be proportionate to contributions. (2) All other officers to be elected by the board of directors; these should include the president, secretary, treasurer, etc., and the medical officer. (3) The executive officer may be either the president, secretary, medical officer, treasurer; he should be in charge, subject to restrictions imposed by the constitution, by-laws, and the supervision of the board of directors.

Whatever the object for which organized, every effort should be made to make the benefits reach every employee, as otherwise, as shown by experience, the low-paid workers are least liable to join and they are the very ones who stand in greatest need of the benefits.

In order to accomplish this, membership would have to be compulsory. It is realized that this principle is objected to by many, so, if some other method can be devised by which the benefits are made universal, such a method is advisable. Compulsion, when exercised under a democratic administration such as that contemplated in the above outline, will, no doubt, relieve the compulsory feature of many of the objections.

This plan of organization ownership and control of an "employees' service department" is not presented as an ideal, but as an improvement over present methods, and as one calculated to remove some of the present objectionable features.

Since most of the work in this field usually has for its object the improvement of the health of the workers, and since the industrial workers and their families form a very considerable proportion of the community population, it would seem but just that health departments should have a field of usefulness in these departments, and should get in touch with them and endeavor to work out some plan whereby their work would be coordinated with the "new public health" movement.

It may be possible to do this through the whole-time medical officer of the department. Such a link with the health departments would give to health authorities the personal touch with the home and the shop which is at present lacking.

Working together in this way, the "employees' service department" would become an instrument of extraordinary value in improving the health of the wage-earning population.

Employees at Macy's, New York, Conduct Welfare Work

BY HARRY B. TAPLIN.

There is no so-called welfare department at Macy's. That does not mean, however, that the store is not vitally interested in the welfare of all the employees. It simply means that whatever is done is undertaken, so far as possible, by the employees themselves, working together for their own welfare. Macy's believes in encouraging self-improvement, social intercourse, and cooperation for mutual advantage along democratic, self-governing lines. With this in view, the store provides opportunities for people to learn to help themselves.

The various employees' organizations at Macy's illustrate this policy. The Macy Mutual Aid Association, to which all the employees of the store belong, undertake to

care for the health and physical well-being of all the employees. The work of the association is conducted entirely under the supervision and management of the board of directors, elected annually by the employees of the store. The association employs through its regular elected officers, who are responsible for its management, a physician, two trained nurses, and a dentist. All employees receive a thorough physical examination, and are free to consult the doctor about their ailments or to go to the nurse in the hospital for treatment. When ill, the visiting nurse calls on them to see that they receive proper medical attention.

From the funds supplied by the weekly dues, members are entitled to receive sick benefits for a period of ten weeks. There is also a death benefit. Employees who desire to do so may have their teeth attended to at cost, the work being done on store time. Those who are unable to pay promptly for the dental work at the time it is done are allowed to make small weekly payments.

Under the auspices of the Macy Mutual Aid Association a free library is conducted, from which employees can obtain both books and magazines. Some of the books are loaned by the New York Public Library.

A distinct effort is made at Macy's to emphasize the importance of health. The store has maintained for many years a lunch room for the employees, so that they may obtain food of the best quality at cost. The store physician has given regular talks to the employees on diet and other helpful matters. In order to provide an opportunity for a healthful vacation, the employees have organized, with the assistance of the store, a summer camp for the girls, and, by stimulating an interest in saving for a vacation, have encouraged as many as possible to attend. To this end a branch of the Vacation Association has been maintained at the store for several years, and over 1,000 deposit savings regularly, many of them setting aside something each week for their vacation period.

The girls' camp development was an outgrowth of the efforts made by the Community Club, an organization of both male and female employees devoted to self-improvement and social intercourse. When the members of the Community Club expressed a desire to have a summer place where the girls of the store could spend their vacations together, they agreed to be responsible for the successful management of such an undertaking. Through the support of the firm the camp was opened for the summer of 1915, and proved so successful that a larger place has been obtained on the south shore of Long Island for the coming summer. This camp will be under the general management of a camp committee, comprised of female employees representing the different floors of the store. The girls who go to camp pay their own board and help with the work of the camp; the store provides the camp, including the equipment, and meets the general expense of operation. The Community Club, by cooperating with an outside organization, also provided an opportunity in 1915 for the young men of the store to go to a well-conducted camp near West Point, N. Y.

The young men had already shown their interest in developing themselves along physical lines by having organized and conducted an athletic club, which met one evening each week at the Twenty-third street branch of the Young Men's Christian Association. So greatly has this athletic work interested the men employed at the store that plans have been laid for the use of recreation grounds, located in Brooklyn, during the coming summer. The employees at Macey's intend to organize an independent athletic club, and conduct baseball games and athletic sports on these grounds during their free time. The development has been fostered jointly by members of the Community Athletic Club and members of the Macy Men's Club.

The Macy Men's Club is a self-governing organization, to which any man employed in the store may belong on payment of the regular dues, 25 cents per month. It came into existence in response to a demand for some place to which the men could go during their free time. For years the store had maintained a rest room for the female employees, but had provided no place for the men. The club is located in quarters near the store, and is well patronized, especially during the lunch period, when the men enjoy a quiet smoke. The management of the club is vested in a board of directors, who are elected by ballot, and who are held responsible by the members of the club for the promotion of the best interests of their organization. The club has two floors, one of which is used as a lunch room and the other for reading, smoking, and games. Food of the best quality is served at cost, and may be obtained at any time from 8 a. m. until 8 p. m.

The men at Macy's take a very great interest in their club, and, through the committees which they have appointed, supervise all details from the serving of the food to the upkeep of the quarters.

The men's club has been instrumental in bringing the men together in a most democratic manner. The membership of 500 includes all types and kinds, regardless of race or position. At the club one man is as good as another—there is no distinction of any kind. They eat at the same tables, are served the same food, wait on themselves in the same way, and sit down together in the smoking room after their meal for a friendly game or a quiet chat. The common funds of the club are used for such purposes as buying a new piano for the members who can play, or providing magazines and games. Every six months the balance in the treasury is turned over by vote of the board to R. H. Macy & Co. in partial payment of the general expenses of maintaining the men's club. An effort has been made by the members to make the club as near self-supporting as possible, as this is the goal toward which they are working.

The employees at Macy's believe in promoting the "get-together" spirit. They enjoy arranging outings, dramatic entertainments, and other social occasions. The men's club held a "Ladies' Night" in their club rooms, to which they invited all the women employed at the store. A musical entertainment was provided, with refreshments and dancing. This club also conducted a large outing last summer, which was well attended by the employees, including executives, and those present greatly enjoyed the baseball game and outdoor athletic sports. When over 600 sat down to dinner at the long tables, it seemed like one large family. The Community Club, which conducts classes in dancing, gymnastics, swimming, singing, sewing, and millinery, has also played an important part in definitely fostering the spirit of sociability by providing ways and means of bringing the employees together. Through its well-organized dramatic club the members of the Community Club have arranged interesting dramatic entertainments, which have attracted large audiences of 1,000 or more employees. After the "show" the employees remain to dance and enjoy a social time.

Macy's policy is to help employees to help themselves. The younger girls have an exceptional opportunity to help themselves by attending the Macy Continuation School, conducted by the department of education in conjunction with the store. The purpose of this school is to supplement the education of those girls who realize, since

going into business, that they are deficient in certain grammar school branches, such as ordinary arithmetic, spelling, penmanship, as well as in the use of English. Any girl who wishes to attend this school ten hours each week may do so without any loss of salary or other inconvenience. This is entirely voluntary, as all the employees at Macy's are over 16 years of age and are therefore not obliged to attend school. The store has met the employees half way in this as in other matters. If the girls wish to improve their education, every effort will be made to provide a means to that end. The school has been filled ever since it was started, and the girls who have completed the work have been greatly benefited by this training; in fact, it has been possible to promote a large majority of these girls to better positions as a result of the development which came from attending the Macy Continuation School.

The girls who have gone through the Macey Continuation School have banded themselves together into an organization known as the Associate Alumnæ of the Macy Continuation School. By this method they intend to keep alive the tradition and influence of the school as these affect their work and their lives. With their own officers they conduct a regular program at the monthly meetings, and learn to put into practice some of the fundamental principles of conduct and procedure which they were taught in school. Each girl wears as a badge of honor a small pin on which are the Macy Red Star and M. C. S. (Macy Continuation School). The girls are expected to maintain a high standard of work, and thereby demonstrate to others the value of their special training.

The Fellowship Club of the Commonwealth Steel Company, St. Louis

The Commonwealth Steel Company operates an open-hearth cast steel foundry. Its products consist of cast steel devices for railroad equipment, trucks, antitelescoping platforms, underframing, and important devices for locomotives. It will be readily seen that these products involve great responsibility on the part of the manufacturers, not only in the care of their own employees, but in order that the public may be protected against accident in their use. The watchword, "Fellowship," has been taken by the company as a magic charm, and its efforts toward efficiency emanate from an expression of this watchword in the factory and in the Fellowship Club, the big organization to which its employees belong. The company begins the training of its employees when they are young, and conducts for this purpose an interesting school system in which are taught the commercial branches and the various branches of the mechanic arts. There is a settlement

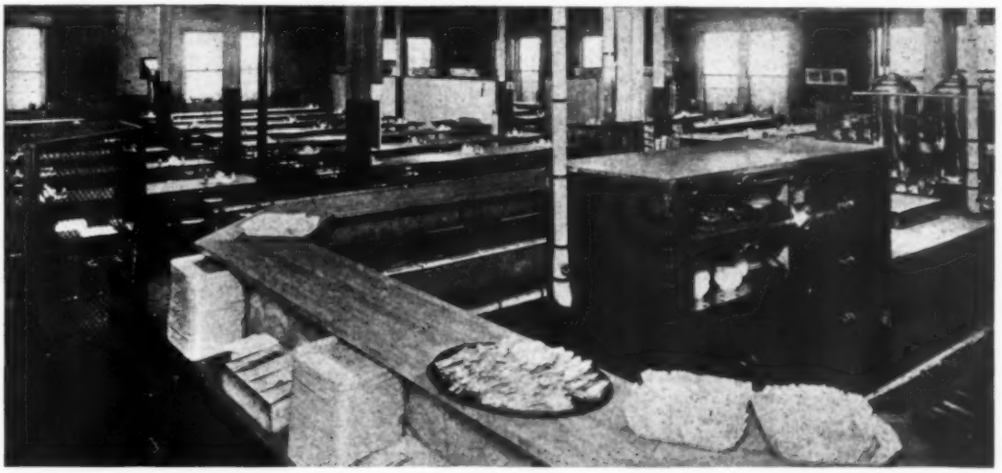


Fig. 1. Commonwealth Steel Company, St. Louis. Cafeteria restaurant.

Fig. 2. Commonwealth Steel Company, St. Louis. Employees' store and room for those who bring lunches.

house around which the resident employees rally for their entertainment, recreation, and social intercourse. "The Home Fellowship Department" is conducted by Miss Edna Haas, whose chief duty it is to maintain intimate touch with the 35 percent of the employees who are foreign-born. Miss Haas lives among the foreign employees and in the home of one of them, and has wound herself into the hearts of the people and the life of the community until she is the center of their social and domestic lives.

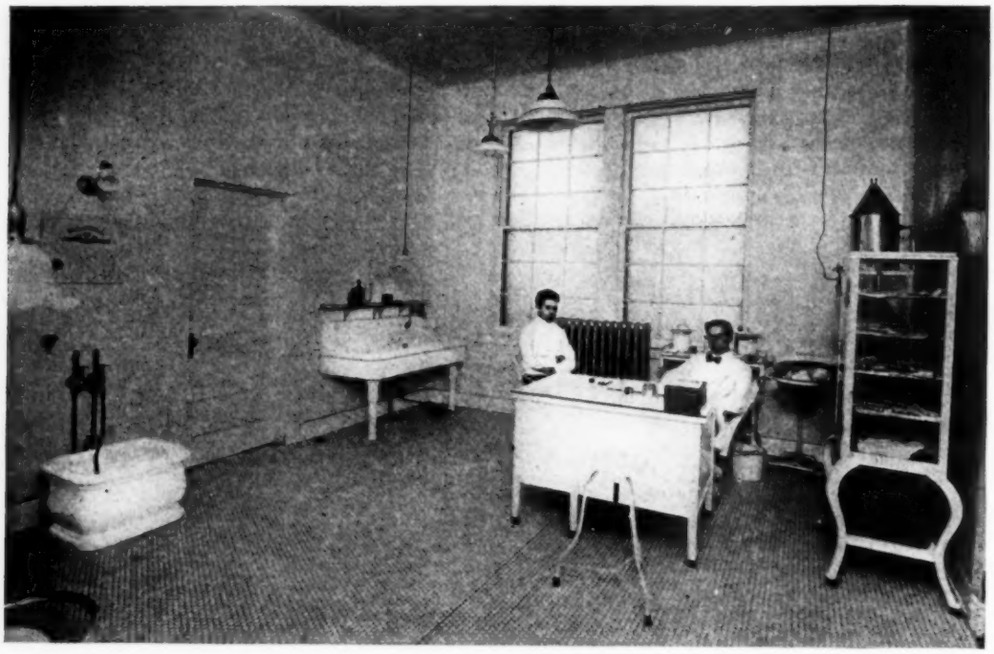


Fig. 3. Commonwealth Steel Company, St. Louis. Dispensary.

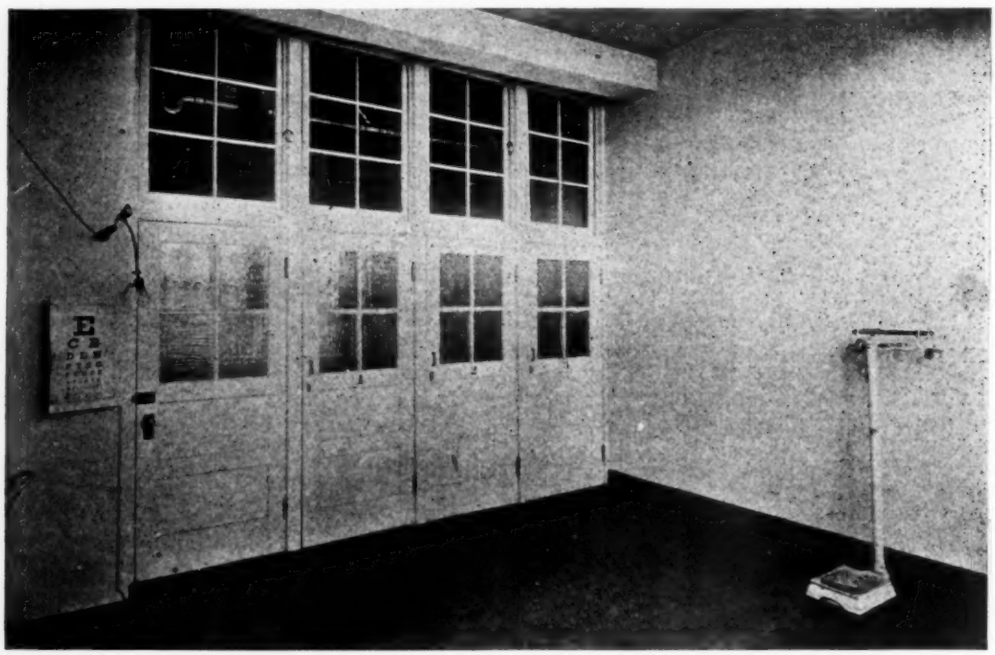


Fig. 4. Commonwealth Steel Company, St. Louis. Physical examination room, with dressing booth to expedite examinations.

There are prize systems in the factory for efficient work, and this prize system has developed to a point that each person in the employ of the company has come to consider himself a guardian of the safety of his fellow-workmen. Employees are invited to make suggestions for improvement in the work, or in matters of comfort and happiness of the people. If the suggestion of an employee is adopted, he is presented with a handsome bronze fob, and at intervals public acknowledgment is made for assistance from employees in the creation of new devices, or the institution of new methods, or the putting into practice of new safety devices.

The board of governors of the Fellowship Club, made up of employees of the company, is constituted also a board for the administration of the commissary depart-

ment. In the restaurant 1,200 meals are served each day, and, because of its uniqueness, a sample menu is presented, with the prices of the articles of food:

Old-fashioned bean soup (four crackers)	$0.04
Roast pork, dressing, mashed potatoes, and gravy	.12
Veal stew with dumplings and potatoes	.12
Pork and beans	.05
Wheat muffins	.03
Scalloped potatoes	.03
String beans	.03
Succotash	.03
Pickled beets	.03
Cold slaw	.05
Ice cream	.05
Fruits	.05
Pies, all kinds	.04
Puddings	.04
Bread, four slices	.01
Pure butter, one piece	.01
Coffee, 10-ounce mug	.03
Tea, 10-ounce mug	.03
Milk, one-third quart	.03

Because of its rather isolated location in a small community, and because the purchase of wholesome, perishable articles at private stores near the factory is unsatisfactory, the corporation, on petition from the employees, opened a community store, at which employees are permitted to purchase for cash, or for redeemable coupons, such articles as fresh meats, groceries, vegetables, and the simpler articles of clothing, such as overalls, blankets, and those things that can be purchased by the company in large quantities at a greatly reduced price. The company has its own hospital and dispensary, where physicians are constantly on hand for cases of illness or needed surgical work.

How One Corporation Extends Its Welfare Work to the Lower Animals in Its Employ

"Inhuman abuse of live stock, or negligence resulting in its death."

This is a prominent paragraph in the list of offenses posted at the mines and coke ovens of the Colorado Fuel and Iron Company, for the commission of which a workman is liable to discharge without notice. The posting of this list is in accordance with the terms of the Industrial Representation Plan. For other offenses, not on the list employees cannot be discharged without first having been notified in writing that a repetition of the offense may be cause for dismissal.

The list of offenses punishable by discharge without notice consist mainly of violations of law and of misconduct which endangers the lives of fellow-workmen. The rule regarding abuse of live stock, however, is enforced just as strictly as any other, and employees are expected to take every measure dictated by humanity and good sense in their treatment of mine mules.

KICKS AND BLOWS, OLD SYSTEM

Humanity in the mule stable has not always been a part of the coal mining system. In former days the mine mule in many localities was given less care than a piece of machinery, and often was at the mercy of a brutal and ignorant driver who had no thought but to get the largest possible amount of work out of the animal by dint of blows, and frequently the work that the mule was expected to do was out of all proportion to his maximum ability. Instances of mules being beaten to death are all too common in the earlier history of coal mining.

The wretched mule was frequently forced to toil from early morning until evening without a particle of grain and without a drop of water to wash the coal dust from his parched throat.

HUMANITY AND SCIENCE COMBINE

In the mines of the Colorado Fuel and Iron Company the humane treatment of mules has been a subject of careful attention for years. Scientific thought has been directed toward the best methods of caring for live stock until a system has been built up which combines the dictates of humanity with the sound business principle of conserving the supply of animals.

The regulation which provides discharge for abuse of a mule is only one of the means taken to secure this end. The company employs an expert veterinarian, and a mule hospital is maintained at a central point in Las Animas county, where injured or seriously sick animals are taken for medical or surgical treatment. At all operating mines it is the intention to carry at least a 10 percent surplus of mules to handle emergency work and to relieve injured or tired animals. Mules working underground, except in emergencies, are in harness only eight hours, and sometimes a much shorter period where the work is unusually heavy.

At all mines in the Trinidad and Walsenburg districts the stables are above ground. In other districts there are a few underground stables, which are kept in just as sanitary and comfortable a condition as those on the surface. All the stables have large stalls floored with packed earth and coke braize or planking. Ample provision is made for light, and air drafts are prevented in order that mules may not take cold after coming from their work. Drainage is supplied by arched alleys running between double rows of stalls.

PLENTY OF WATER FURNISHED

Water is furnished all mules in abundance in the mines, as well as at the stables. Sometimes this water has to be piped from long distances at considerable expense, but no mule ever lacks for a drink of water in the stable or at work. The stables are cleaned daily, and sometimes twice a day. In the underground stables the manure is hoisted from the mine each day, and drainage is provided by pipe or sewage line to the sump, where it is pumped to the surface.

The company owns about 1,000 mules, the average value of which is $157 each. These mules are used principally in the coal mines, although a considerable number are in the iron mines and limestone quarries, and some in the Minnequa steel works.

Welfare Work of L. S. Donaldson Company, Minneapolis

BY ETHELYN LESLIE HUSTON.

The mental attitude of the average business man in regard to the care of employees is, I have found, rather peculiar. A few employers are direct and practical. They think, as in the "Choir Invisible," that the camel crossing the desert with a burden on his hump may have its reason in a divine plan, but, if it has a sore under the burden, why the sore? The practical man, consequently, gives healing ointment for the sore, promptly and simply, and leaves analysis and deduction to his skeptical brethren with his blessing. Meantime the galled shoulders under the burden sap two-thirds of the camel's energy, and the skeptical brethren hold up their hands and cry aloud that the camel refuses to smile and look pleasant.

What is Donaldson's care of it's people? First and most important, the silence room; twelve sanitary couches, laundered blue and white covers, wash blankets—coolness, darkness, perfect quiet. Next, the hospital room, with medical and surgical remedies, hot water bags, crushed ice bags, etc.

Then comes in one point where the architecture does count—that is the location of the welfare office, which is for the welfare director or trained nurse, whichever she is

called. This office in Donaldson's the girls and women pass on the way to the silence room. Its door stands open, and this means that many pains and aches and incipient troubles pause at the door between 11 a. m. and 3 p. m. that would not go to a distant and formal "hospital room." It must be remembered that the majority of employees are naturally diffident and shy instinctively at red tape and officialdom. They are as suspicious and easily alarmed as the birds of the forest. A glittering hospital and starched trained nurse is to them a combination to be faced only on a stretcher.

Fig. 1. L. S. Donaldson Company, Minneapolis. Silence room for women employees.

For very stormy weather we have skirts, slippers, and stockings to lend while the girls' clothing is being dried. The slippers are also borrowed to wear while shoes are being mended. Umbrellas are rented for 5 cents each.

The Sick Benefit Association helps the sick financially, and the firm cooperates with the association in having a house physician and in caring for those requiring a change of climate or protracted rest. The financial crises that arise at times are considered by the welfare department and assistance given, thus protecting employees from professional money lenders.

Donaldson Hall is a very delightful home in the best residential part of the city, where the girls obtain board for $3 and $3.50 per week. Donaldson Camp, on Independence Lake, is popular in the summer for vacations and week-ends.

The social side of life includes dancing, basketball, choral societies, a baseball team, and military organization. The latter, with a band composed of employees, promises to keep things interesting during the summer.

The recreation room has a public library branch, and is furnished with piano, easy chairs, writing materials, and magazines. Adjoining this room is the employees' lunch room, where wholesome lunches are served at very low prices.

How the Wheatena Company, Rahway, N. J., Furnished a Hospital for Its Community

It is an old and obvious fact that the exercise of a muscle gives it growth and strength; so, too, the exercise of a conscience sets it up more acutely and gives it a hair-trigger function. The practice of benevolence or charity, or any of the virtues, has precisely the same effect and it is one of the marvels in industrial welfare work that once a corporation or firm or individual begins to do something a little out of the usual for employees, there comes so great a satisfaction, not to say pleasure, that an

Fig. 1.

Fig. 2.

The Wheatena Company, Rahway, N. J. Fig. 1—A view of the operating room in the plant's hospital. Fig. 2—A view of the emergency ward in the plant's hospital.

impulse drives the doer of good to go a little farther and to do a little more.

This revery is apropos, just at this moment, of a case in point. Not long since the Wheatena Company, of Rahway, N. J., was engaged in the construction of some additional factory buildings. While the work was under way it happened one day that a locomotive of the Pennsylvania Railroad Company, engaged in switching about the company's plant, exploded and severely injured the engineer and fireman. There was no hospital in Rahway, and the men were hurried into the plant and given such first aid as the facilities permitted. No doctor could be found at the moment, and an hour and a half had elapsed before the men received attention. They were then taken to a hospital in Elizabeth, eight miles away, where they both died after very great suffering.

Immediately the company, that had been looking fairly well after the minor ills of its own employees, stopped work on its new building and had the plans changed to include an emergency hospital suite, including an operating room, a hospital room, and the necessary auxiliaries. As soon as these were completed, they were thrown open to the physicians and the public of Rahway, and now Rahway has an excellent, if small, hospital, capable of meeting any emergency.

Industrial Welfare Problems

To the Editor of THE MODERN HOSPITAL:

I want, first, to congratulate you on the August number of THE MODERN HOSPITAL. It was in every way worthy of your splendid publication, from which we have had many benefits in our own hospital and health service for our employees.

We note in your August number that many industrial corporations serve a cafeteria lunch, most of them a very good lunch—one that might be served by any commercial lunch room. But we notice that some corporations make a very strong point on the chemistry of the foods served at these lunches.

Does THE MODERN HOSPITAL believe it is commercially practical to pay the same attention to the chemistry of these foods as it would be in the special dietary for the sick? Isn't that carrying the commercial lunch a little too far? A NEW ENGLAND CORPORATION.

It would be carrying the commercial lunch idea a little too far if the proposal carried with it the same complexities that are involved in the hospital dietary; but you are not feeding sick people, and you need not think about diseased conditions. It seems to us that your only problem is to calculate the kind of work at which your people are engaged, and provide food, not only that they can digest, but the kind that will give the greatest amount of nutrition and at the same time be most appetizing. If you have men to feed who are doing hard physical work, you will have no trouble about their appetites, and meat and potatoes and bread will meet their greatest needs, because their digestions will take care of almost anything, and such articles as these, varied a little from day to day, to keep the menu from becoming monotonous, will conserve their strength.

But if you have many clerks whose work is confining, but not physically arduous, you will find that their appetites must be coaxed and that they cannot relish the stronger foods.

Your hardest problem undoubtedly is to feed your women workers, of whom we judge there must be a good many, because of the nature of your business. You will notice that in the public restaurants women eat salads and pastries and rarely meats or potatoes or bread. But salads and pastries, coffee, tea, and the various knick-knacks furnish very little nutriment; therefore it seems to us that if the lunch to which women are seated can be made "tasty" and at the same time nutritious, it will meet their requirements, even if it does not meet their fancies. In some industrial lunch rooms women are coaxed to eat the nutritious and easily digested things by attaching a low price to them, and by putting an almost prohibitive price on the nerve-exciting, nonnutritious foods; milk and cocoa, of the fluids, and rice or bread puddings, custards and fruits among the desserts, are among the former, and coffee and tea of the fluids, and salads, are among the undesirable things.

It seems to us that these menu problems can be best settled for employees without going into any arguments with them, because most people object to having their daily lives "regulated" for them.

Welfare Work and Strikes

To the Editor of THE MODERN HOSPITAL:

Why is it, if much welfare work conduces to loyalty and the happiness of industrial workers, that those corporations that do the most for their people seem to be the greatest sufferers from strikes? We are rather coming to the opinion that too much welfare work is quite as bad a thing as too little. But we have not been able to hit upon the proper dividing line; perhaps you can help us.
ONE OF THE SMALLER ONES.

If welfare work among industrial corporations had been standardized and all its problems settled, THE MODERN HOSPITAL would have found no inspiration or even need to initiate a propaganda in its behalf.

Welfare work in the industries is in its infancy; nothing about it has been standardized. There is something about it, however, that awakens responses in the public mind, and it is not to be wondered at that some of the corporations, with the American spirit of advertising, have rather exploited their welfare work as a publicity enterprise. This accounts for the fact that much of the correspondence of THE MODERN HOSPITAL with the corporations in regard to their welfare work has been conducted through their publicity agents.

This attitude of the corporations would be likely to permeate the work itself, and in some cases it has been made plain to THE MODERN HOSPITAL that employees have felt that they, too, were being exploited, and that whatever work was being done was not in their interest, but was just one more "advertising dodge."

Then, too, some corporations have not been quite wise in the methods employed, and have allowed a feeling to creep in among the employees that they were being made the recipients of charity—a feeling that would naturally be resented. But all this will clarify in time; corporations will realize that their welfare work is merely an additional factory output, that the money expended is an investment sure to net one of the largest profits in the form of greater efficiency. As this realization comes, the welfare work will assume an entirely different aspect, and the change will react on the employees themselves, who, in turn, will accept it as part of the business, and that the underlying spirit of it all is cooperation, mutual interest, and team-work. Then there will be no fly in the ointment of harmony, and the welfare work will really be a deterrent of strikes rather than an irritant cause.

Dr. Alfred F. Beck, who has been chief resident physician at the Samaritan Hospital, Philadelphia, for the last three years, has resigned to engage in private practice.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Revolving Operating Room

BY CARL L. HOAG, M. D.,
Assistant in Surgery, University of California Medical School, San Francisco.

In those clinics and teaching institutions in which there are always a number of spectators at operations the problem is how to arrange the equipment so that all can see and hear. The tendency now seems to be toward constructing small amphitheaters, so that the observer can get close to the operator. In such amphitheaters the patient and the entire equipment of the operating room have to be moved out after each operation, and the room must be set up again. This takes up much valuable time, causes confusion, and often renders the asepsis questionable. Other difficulties arise—there are a number of reasons why the patient should not be anesthetized in the room in

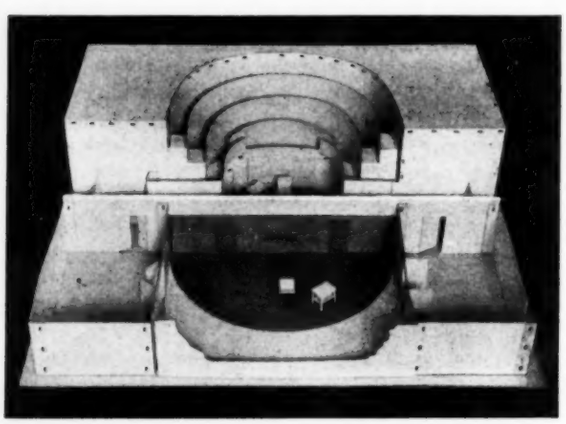


Fig. 1. Model, with stage in position. The partition extends to the ceiling and completely divides the two rooms.

the presence of the audience. To avoid this, either the anesthetic must be started in another room or the audience must leave the amphitheater for a short time. When using nitrous oxid we have to move not only the patient, but the machine and large, heavy tanks. If the audience has to move, there is added confusion, discomfort, and raising of dust. The use of two operating rooms alternately has been a great help, but it does not avoid the need for moving the audience.

While visiting a large number of surgical clinics recently I was struck by the confusion occasioned in all of them by the arrangements for changing from one operation to another. It occurred to me then that a revolving operating room, similar to the revolving stages used in some of our theaters, might entirely solve the problem. With this plan in mind, I constructed the model shown in the accompanying illustrations.

There was one difficulty to be overcome in this plan. The ordinary operating room is built in the form of a half-ellipse, so that the seats on either side are as close to the table as possible. It is obvious that if the floor is to revolve, the space occupied must be circular. If it is desired to retain the elliptical shape with its advantages, two methods of construction may be followed. One would be to revolve a smaller, central part of the floor space. This would necessitate moving all the tables near the audience after the floor has been rotated into place. The

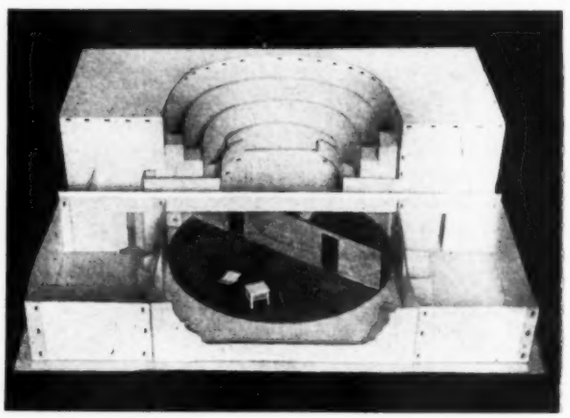


Fig. 2. Model, with stage revolving.

other would be to elevate the side seats, allowing them to project like the boxes in a theater. This latter plan offers the greatest number of advantages in that the space underneath can be used in the operating room, and at the same time the side seats are sufficiently elevated to bring the operative field into view over the shoulders of the staff.

As represented in the model, the boxes are about 6½ feet above the floor, thus allowing one to walk under the projection. It likewise allows a 6½-foot partition between the two halves of the revolving floor to swing into place. There are swinging doors in the partition, through which the surgeon may pass when the stage is turned. The stage rotates around a hollow center, through which water and nitrous-oxid-oxygen connections enter each room. The scrubbing sinks, if placed in the center, as shown here, revolve with the stage. The waste water runs into a circular hopper underneath the floor. These sinks may perhaps be located to better advantage under the gallery, where they are readily reached through a side door from under each box. The stage sinks have been provided, however, for the convenience of those surgeons who wish to address the audience while scrubbing up. To prevent accident, safety gates are provided to automatically close the halls and doorways at the time when the stage begins to revolve.

The stage turns on two or more circular tracks by power either from an electric motor or from a hand windlass. The two operating rooms are built opposite each other—one with a gallery, the other without. One side of the stage can be set up while the other is in use, and the first operation, either complete or incomplete, can be swung into the back room while the new one proceeds.

A rotating operating room offers the following advantages: 1, the saving of time and prevention of noise and confusion between operations; 2, anesthetization on the table without moving either patient, equipment, or audi-

ence; 3, the possible use of a stationary table, such as the Balfour; 4, it permits each operation to begin on schedule time by swinging the prolonged operation into the opposite room for completion, which is particularly important when observing students' hours; 5, it permits of the independent or combined use of two operating rooms as desired, without increase of space or duplication of equipment; 6, it promotes better asepsis.

Uniform for the Wet Nurse

BY JULIUS H. HESS, M. D., Chicago.

To overcome the slovenly appearance of the wet nurse as she is usually seen wandering about the wards of an

Fig. 1. Dressed for street wear.

infants' hospital, the following described uniform has been devised:

MATERIAL.—To distinguish the wet nurse from the nurses in general training and the infants' nurses, a light-brown striped gingham is used in making the uniform.

UNIFORM.—The uniform must be considered as consisting of three parts—the overdress or street dress, the undervest, and the chemise.

The street dress has for its main features two large

Fig. 2. One lapel of dress raised and thrown over shoulder, one lapel of undervest raised and breast exposed for nursing.

Fig. 3. Both lapels of dress thrown over shoulders, with one breast exposed for nursing.

lapels, which are fastened from the shoulder and so arranged that they can be unsnapped beneath the waist belt and again at a point where they meet in the median line, and readily thrown over either shoulder, preparatory to

Fig. 4. Undervest, with one lapel raised, exposing breast.

nursing. After the nursing the lapel can again be brought down over the front of the waist, snapped in the median line and under the belt, and the nurse is again ready to proceed with her usual duty.

The undervest is shown with two circular flaps fastened by three eyelets, which can readily be released and the

flaps thrown upward, or, better, tucked up under the dress, as shown in Fig. 2. Some of the nurses prefer to run an elastic band of narrow rubber along the upper edge of their ordinary vest, making it loose enough so that with a little tension the upper edge of the undervest can be pulled down beneath the breast which is to be nursed or expressed.

The chemise is of the ordinary type, such as is worn by women, with a very slight elastic band sewed along the upper border from shoulder to shoulder, which allows the chemise to be drawn down beneath the breast and is readily replaced after nursing. It has been our experience that most of the wet nurses can make their own uniforms, and take considerable pride in doing so, when a good pattern is furnished them. When this is not possible, they can be made by the ordinary dressmaker.

A Shadow Box for Use in Stereopticon Demonstrations in Amphitheaters and Rooms Which Cannot be Darkened

BY JULIUS H. HESS AND EMERY H. DU FOUR, Chicago.

The fact that our medical clinical amphitheater at Cook County Hospital could not be darkened led to the construction of the illustrated shadow box (Figs. 1, 2),

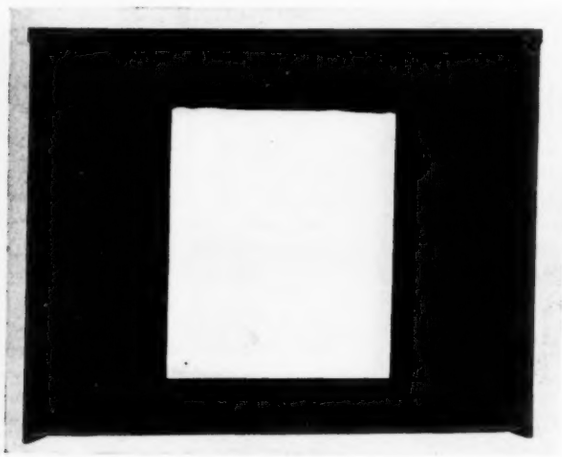


Fig. 1. Shadow box in position, hooked to wall of room.

which consists of four readily detachable sides and an ordinary white roller curtain (Fig. 3), which latter is suspended from hooks fastened at the back of the upper section. The frame is made from thin strips of wood (Fig. 4), and the four sides are covered with heavy black cloth (light-proof), such as is used by photographers. The

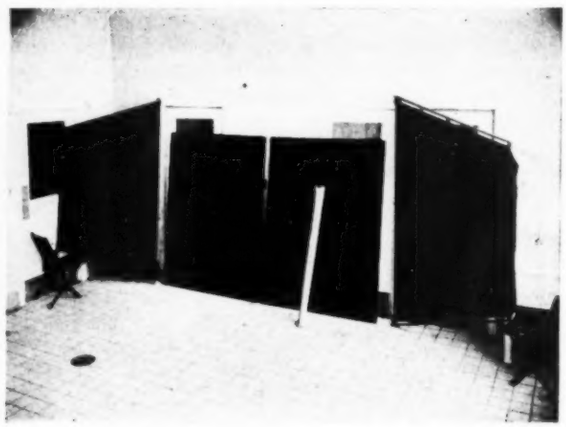


Fig. 3. Four sides and curtain.

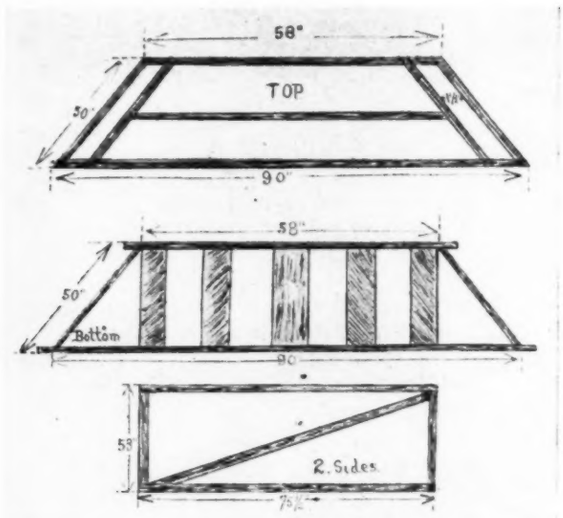


Fig. 4. Diagram of top, bottom, and one side. Frame made of 1-inch square strips; bottom strips 4 inches wide and ⅜ inch thick; weight of box and cloth covering, 45 pounds.

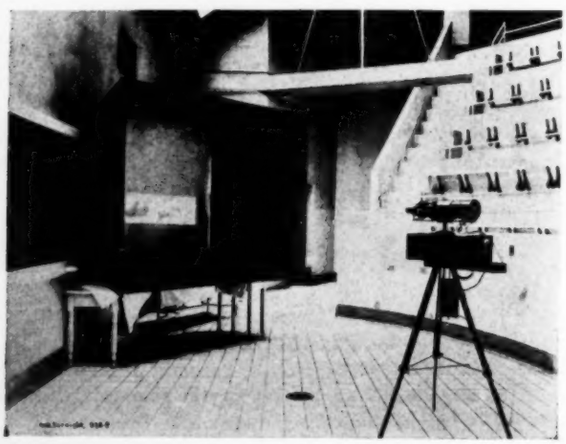


Fig. 2. Shadow box in use.

shadow box complete weighs 45 pounds, and is fastened to the ledge of the black board above and below by four hooks. It can be put up in about three to five minutes and removed even more readily.

Fry Laboratory Glassware

Laboratory workers will be interested in knowing that practically a complete line of laboratory glassware is now being made in this country of a quality of glass which it is claimed is even superior to the Jena glass, which for years has been recognized as the best glass for laboratory utensils. Some of this glass was recently submitted to the testing laboratory of the University of Pittsburgh, and from the report which was made we take the following:

"Four-hundred-c. c. beakers were weighed, then filled with equal volumes of 4 percent caustic soda solution and heated at the boiling point for several hours. On washing with water, drying, and weighing, the loss of weight by the Jena beaker was 5 percent greater than by the Fry beaker, showing greater resistance to caustic soda for the Fry glass.

Eight-hundred-c. c. beakers were filled with distilled water, and a sensitive indicator, methyl red, added. The water was then boiled for ten minutes in each case. Each beaker required the same amount—10 drops of fiftieth-normal acid to neutralize the alkali dissolved. Prolonged evaporation, nearly to dryness, developed no more alkali in either beaker. The Fry glass is, therefore, equal to Jena in resistance to attack by water. The alkali dissolved by this treatment was 0.00031 grams.

The Fry beakers are very satisfactory as regards thermal endurance. We have repeatedly filled beakers of the Fry glass with water and placed them over a free flame, without gauze, bringing them to boiling without accident."

Operating Knife with Detachable Blades

Surgical knives with detachable blades are by no means of recent origin, and, as far as the writer can discover, a certain type of these knives was first used at the university clinic in Marburg, Germany, about ten years ago. Since then quite a variety of different models has been offered to the profession, but many of them were too complicated, which defeated the purpose for which they were designed—that is, simplicity, efficiency, and economy. Recently, however, a new knife has been devised and put on the market under the name of the Parker detachable blade scalpel which, in the writer's opinion, is the simplest and safest device of its kind which has so far been offered. There are no levers or screws, and the handle is made of one piece of steel; the part of the handle holding the blade in place is grooved in front and on the sides about two-thirds back (Fig. 2), and a slot is cut into the blade corresponding in front to the width of the grooved part of the handle. To attach the blade, it is held in the left hand; with the right hand the handle is inserted into the narrowed part of the slot in the blade and pushed forward until it snaps automatically into place, the whole procedure taking but a moment's time. In order to remove the blade, the handle is held with the left hand, the left forefinger presses up the projection on the butt end of the blade, and when this is raised the blade is pulled off the holding arm with the right forefinger and thumb.

Fig. 1. Parker detachable blade.

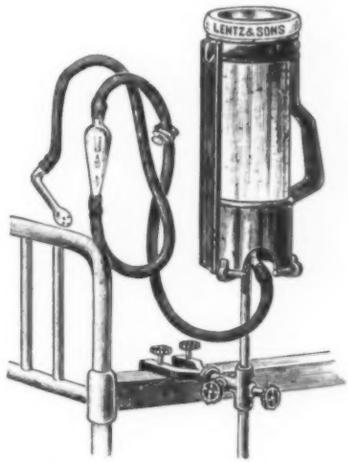
Fig. 2. Showing grooved portion of handle.

Fig. 3. Parker detachable blade, assembled.

The blades are made in four different sizes, both center point and bellied shape, of thin safety razor blade steel. The edges on the blades are hollow ground and carefully honed.

Proctoclysis Apparatus

A simple and efficient apparatus for injecting saline solutions into the rectum, giving the so-called Murphy treatment, has recently been put on the market. The apparatus consists of a metal frame for the purpose of holding a glass container, to the spout of which is attached the usual rubber tubing, with cutoff, proctoclysis dropper, and angular Murphy saline rectal injecting tube. Attached to the frame holding the glass container is a rod which fits into a socket connection on the clamp, and this clamp is so arranged that it can be easily fastened to any of the various types of hospital beds. There is an arrangement on the clamp which permits of changing the angle of the rod holding the apparatus, so that when it is advisable to raise the foot end of the bed, the apparatus will again be in a perpendicular position. As is apparent from the illustration, the reservoir can be raised and lowered and held at whatever height desired by means of a set screw.



Lentz proctoclysis apparatus.

Electric Blanket

Here is an electric blanket which will appeal to those whose patients require outdoor sleeping. This blanket is of liberal size, 50 by 75 inches, and any degree of heat up to 112 may be had. The usual method of using the blanket is to pin it to the mattress, and then cover with a sheet. In extremely cold weather the maximum heat is used for a short time, and by means of a regulator the temperature can then be reduced to the desired point. The manufacturer states that it is impossible for any part to short-circuit, so that there is no likelihood of shock or fire. At the rate of 10 cents per kilowatt per hour, cost of operating current, the average expense for operating the blanket would be about 15 cents per month.

Dr. T. F. Whiteside has opened a hospital at Timpson, Tex.

QUERIES AND ANSWERS

Hospital Admission of Charity Cases

To the Editor of THE MODERN HOSPITAL:

We are somewhat perturbed about the basis of admission of our charity cases to this hospital. Could you put us in touch with the social service department of any hospital that uses a printed questionaire in admitting patients, from which their eligibility as charity or pay cases is decided?

E. J. EDSALL,
Superintendent St. Margaret's Memorial Hospital, Pittsburg.

We cannot find any example of a social service department which devotes itself especially to the work of determining the amount that cases should pay at admission to a hospital. The information gathered by social service departments, however, in the course of their work with ward patients, is frequently found of assistance to the financial officer of the institution.

Social service departments have been established for the purpose of assisting patients who, by reason of poverty, unemployment, personal or family weakness, or misfortune, need help, and in particular need it in order that medical treatment or convalescence shall be effective. The cases referred to the social service department are, therefore, selected for reasons that do not refer to the patient's financial ability to pay a hospital fee. If the social service department were to see all patients admitted and be charged with the responsibility in determining the amount they could pay, the department, in many instances, would have little time to do the social work for which it is usually established.

In practice the social service department in a number of hospitals sees a considerable proportion of the ward cases, sometimes all of them, at the time of admission or during their stay in the hospital. The facts obtained by the social worker ordinarily include the following ones which bear on the patient's ability to pay, and, as above stated, these facts are, in some individual cases, of use in indicating that the patient could pay something or even more than the usual ward rate.

In addition to the name, address, and other identifying information, there is sought to be determined (1) the occupation of the chief wage earner and the usual weekly wage, (2) the regularity and irregularity of the work, with the view to estimating the amount of wages lost through unemployment or other causes during the course of a year, (3) additional wage earners in the family, (4) their occupation and earnings, (5) total number of persons in family, (6) rent paid.

MICHAEL M. DAVIS, JR.,
Director of the Boston Dispensary.

Laundry Chutes

To the Editor of THE MODERN HOSPITAL:

We are building, and some of us wish to install a laundry chute in the new building. Will you kindly advise whether a laundry chute built inside the hospital is desirable; can it be kept clean and sweet, and is it likely to permit infections to travel from floor to floor?

A WESTERN HOSPITAL.

If you will install the right kind of laundry chute, it will be one of the best investments you can make in your new hospital. Those made of wood or metal or concrete are undesirable; they soon become filthy and "smelly," cannot be cleaned, and altogether are a nuisance that you will regret.

The only laundry chute we know about is one made of heavy cast metal sections, with glazed lining, with a door at each floor built like the porthole of a ship, with sewer connections at the bottom with goose-neck trap, with a crown at the top with hot and cold water connections, and with a ventilator on the roof.

The chute meeting these requirements was devised four or five years ago by several hospital people in conjunction with one of the best hospital architects, and is now being made by the Pfaudler Company, of Rochester, New York.

JOHN A. HORNSBY.

Sterilization of Rubber Gloves

To the Editor of THE MODERN HOSPITAL:

Can you give us a simple and effective way to sterilize rubber gloves so that they will wear afterward?

A SURGICAL NURSE.

Reply by Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland:

The gloves are washed and rinsed in cold running water; then boiled for two minutes and dried. When thoroughly dried, they are inspected; if necessary, patched to make air-tight. The cuff is then folded back, and the number to be used in an operation is folded in two layers of cotton cloth. Between each pair is placed a gauze sponge, and in the cuff of each pair is another small sponge containing talcum powder. The packages are then sterilized in an autoclave at ten pounds pressure for ten minutes. Care must be used to thoroughly dry them with the vacuum before the autoclave is opened. By using the powder sterilized with each pair of gloves, it is easy to put on the gloves dry. This method has been in use some time, and we have no reason to think that it is not entirely adequate sterilization.

Contagious Diseases in General Hospitals

To the Editor of THE MODERN HOSPITAL:

In your judgment, could a hospital undertake the treatment of contagious diseases in a wing to be added for that purpose, or would it have to be done in an entirely separate building? We may enlarge our present building, and the question has arisen whether we could in any way provide for the treatment of contagious diseases. Some have held that an addition to the building or a separate wing might be constructed so that it could be used in the general work of the hospital at ordinary times and for contagious discases when the necessity arose.

We would appreciate any information which you would give us as to how a hospital in a small city might be equipped so as to treat these contagious diseases.

A WESTERN HOSPITAL.

The only real demand in an isolation department is that it shall have facilities to cut off intercourse with the rest of the house; a door that can be locked is quite an efficient separation, and the department should have at least four units or rooms in which the chief infections could be isolated. Without knowing anything about your particular conditions, we might say that an ideal arrangement would be four rooms, each containing a small alcove or separate room in which a gas plate, running water, toilet, and bath would be installed. Each of these units should open to the outside, as, for instance, on a porch, so

that an orderly could deliver food, necessary medicine, clean linens, etc., and take away the soiled linens, soiled dishes, and so on, without going into the building. The method of handling these various items is a technic in itself; the dishes, after being used in infected quarters, would be immersed in a 3-percent carbolic solution and delivered to the orderly by setting them on the porch in a bucket or tub; soiled clothing would be delivered in the same way, or placed in a regular laundry bag, the latter not having been in the room, but left on the outside for the purpose by the orderly, who returns to get the full bag.

It rarely happens that you will have more than one or two infections at a time, and the other rooms of this suite, which, by the way, would have additional doors opening on the inside corridor, could be used for any other purpose or for any other class of patients. Such use would depend, however, on another very particular, but easy, technic in the cleaning of the rooms after a case of one of the communicable diseases is released. We are not using fumigants very much at present, and under ordinary hospital conditions they are not efficient, and we do better now by sending the mattress to the sterilizer, or, in the absence of such a device, by soaking it in a 3-percent carbolic solution for twelve hours in a bath tub, and by employing the same methods with blankets and pillows; the blankets should not be sent to the sterilizer, however, as it destroys the fabric. The room itself is cleaned—ceiling, walls, woodwork, and floors—with green soap and warm water, or a 3-percent carbolic solution may be used if desired, although it is not necessary and leaves an odor that is undesirable. The furniture and all woodwork should be cleaned in this same way.

A number of hospital superintendents make very little of the separation of the quarters for the accommodation of the communicable diseases, but they make very much of a technic of the procedures that are necessary to prevent the carrying of infections from one patient to another. These men build their communicable disease hospitals or pavilions just exactly as a general hospital would be built, and they put the segregation and isolation into the doctor and the nurse, using different gowns and gloves for the different diseases, and depend a great deal on soap and water. So that, in a final analysis, it seems you will be perfectly safe in building your communicable disease unit as a part of your proposed new building. If you could have all these rooms on one corridor, with double doors separating that corridor from the rest of the house, in case of necessity, you would be entirely safe to go into the care of the communicable diseases.

Private Convalescent Homes

To the Editor of THE MODERN HOSPITAL:

Knowing that you are well acquainted with various conditions all over the country, I would like to know if, in your judgment, there would be a demand for a private convalescent home. I am a nurse of long experience and have had charge of hospitals, and I am now thinking of opening a private convalescent home. Could I make it pay and are such homes in demand?

A SUPERINTENDENT.

THE MODERN HOSPITAL has been preaching the desirability of convalescent homes whenever the opportunity offered, but it is to be greatly feared that a convalescent home conducted in the way that you propose would not be a paying proposition. It seems that up to the present time convalescent homes should be opened and operated by town hospitals. These convalescent homes could have their own milk and eggs and vegetables on a considerable piece of land in the country; and not only could patients be kept there for a very much lower rate than in the town institution, but they would have the benefits of these fresh, wholesome foods, pure air, and quiet that ought to go far toward aiding their recovery.

The convalescent home conducted as you are thinking about doing it would be little more or less than a sanatorium, and a sanatorium, if it is conducted right, is a very exacting institution, requiring a lot of money and strong medical support. The equipment of a sanatorium is quite as elaborate as a general hospital, and we doubt very much whether anyone without exceptional connections and a large fund behind him could afford to embark in that business. If you could get a number of physicians having wealthy patients to support you, and if you have ample funds to build, equip, and man such a sanatorium, you could succeed. Otherwise probably not.

Red Cross Equips Two Base Hospitals

The Red Cross announces that gifts amounting to $50,000 have been received and will be utilized in the purchase for equipment for 500-bed base hospitals to be located in New York city. It is expected to soon secure sufficient funds for the equipment of a third hospital. Three full staffs of surgeons, nurses, etc., have been organized and are under the direction of Dr. George D. Stewart, Dr. George E. Brewer, and Dr. Charles L. Gibson.

Steps are being taken by the American Red Cross in the direction of sending one or two new hospital units of six doctors and eight nurses into both Germany and Austria to meet the conditions under which the British government will permit the shipment of hospital supplies to the central empires, the position having recently been taken that only such shipments of relief supplies as are destined for hospitals maintained by the American Red Cross can be allowed to pass through the blockade. The hospital units sent to the warring countries at the beginning of the war were withdrawn last October, owing to lack of funds.

As a result of investigations made by the Pennsylvania Economy and Efficiency Commission, the Pennsylvania State Hospital will hereafter be required to buy provisions and other staple supplies from dealers making the lowest prices. Statements furnished the commission showed a wide variance in the prices charged for such supplies, it is said. An arrangement has been made with local dealers supplying such things as are needed by the hospitals whereby the dealers will allow a uniform reduction from market prices.

At the Examination

"How would you sweat a patient?"

"I would use the most efficacious sudorifics, such as aromatic stimulants, tea, coffee, etc."

"And if they were not sufficient?"

"I would have recourse to volatile oils, such as ether and the alcoholic compounds."

"And if they produced no effect?"

"I would try antimony, James' powder, Dover's powder, —."

"And if they were useless?"

"I would give sarsaparilla, quinine, jaborandi, pilocarpin, —."

The candidate was sweating great drops.

"And if all of these were of no avail?"

"Then I would advise an examination at your hands."—The Medical Pickwick.

HINTS FOR HOSPITAL SUPERINTENDENTS

This column is maintained as a help and reminder to hospital workers about the little things in administration. It is urgently requested that everyone contribute his and her "hints." Each item added to our knowledge helps to fill the common storehouse from which all may draw supplies.

What is it costing your institution to keep your cutting instruments in good order, and what kind of care are they getting in resharpening and putting in order? There are your kitchen knives, your dining room steel meat knives, your scissors in the sewing room and in the surgical supply rooms, there are your razors for the preparation of patients for operation, knives and scissors in the operating and dressing rooms. There are hundreds of these instruments even in a small institution, and want of care can increase the cost of them year by year to an almost inconceivable extent.

There ought to be someone in the hospital known to be competent to sharpen the cutting instruments. The quality of these instruments is predicated on the temper in the steel, and it is very easy to take the temper out of a piece of steel. It can be done by putting them on a cold stone and grinding them when the stone is too dry, or it can be done by running the stone at too high a speed or by using too much pressure in the sharpening. It can also be done, and this is perhaps the commonest way of spoiling cutting instruments, by attempting to put too fine a point on them. You had better look after your cutting instruments and see that they are in proper hands.

Once upon a time there was a hospital that had a dressing room next to a surgical ward, but no door between the two, so that patients had to be wheeled out into the hall from the ward and into the dressing room through two doors. There were fifteen patients in the ward, which meant almost fifteen dressings a day. No one seemed ever to think about the inconvenience of this arrangement or the greater number of nurses that were required to take care of the ward when one or two of them were needed in the dressing room, but one fine day a new supervisor was put on that ward and she persuaded the superintendent to spend $10 to cut a hole through the wall and put a 42-inch door there.

If there were fifteen dressings a day, and each dressing took fifteen minutes, and this condition were permitted to last for fifteen years, it would make a nice calculation to determine how much money was lost in time and service by that inconvenient arrangement, and the value of the suggestion to the hospital when the new supervisor asked for a hole in the wall. This apropos of the little conveniences: a dressing cart that can carry all the paraphernalia with which to do a dressing—not just part of it; a food cart service that can take cold things as well as those that are hot; service boxes and trays that have all of the essentials for the performance of the duty for which they are intended. A hypodermic tray without sterile water means five or ten minutes of the nurse's time, and often inaccuracy and unsterile hypodermic material. A normal salt solution outfit that lacks one of the essentials to the complete performance of a subcutaneous or abdominal irrigation is quite useless until time and energy have been expended. A drinking water fountain in a large ward where there had been none before has been known to release one nurse from that ward. Large wheels in perfect order on all the beds in the hospital will not only save an immense amount of energy, but time as well, comfort of patients, and back-breaking work on the part of the nurses.

How many hospitals are trying to get away from the tombstone idea in tablets and memorials of one sort and another? It isn't so long ago since the big marble slab above the bed, with its indented gold lettering, was quite *au fait* for hospital tablets. Now it almost makes us shudder to see one of these big marble slabs up over a hospital bed, with some such inscription as, "To the Memory of Our Beloved Son, who died," etc.

For thousands of years bronze has been the aristocratic metal, and it has been used almost as routine practice wherever an expensive and ornamental and everlasting monument was to be created. And how beautiful these bronze plates are, whether they are small, 1 by 3 inches, to extend recognition for the gift of a piece of furniture, or whether they are of large size, 12 by 18 inches, to extend honor for the endowment of a room or ward! Bronze lends itself to very beautiful decorative effects, pretty borders and artistic lettering; bronze is a warm and genial color in its golden red. We associate marble with winter and graveyards and with the dead.

And, while we are on this subject, we might think of another phase of the principle of extending honor for gifts to the hospital. A good many institutions in this country are laboring almost with broken backs, speaking financially, because they have accepted gifts that carried with them permission on the part of their donors to use the bed or ward continuously and without further payment than the original donation. There are plenty of hospitals in this country that years ago accepted thousand-dollar endowments for private rooms, and for years these private rooms have been at the free disposition of the givers of this miserable little thousand dollars. That is why at least some hospitals come out at the end of the year with large deficits—because they have been attempting to reimburse donors far beyond the value of the donation. One thousand dollars amounts to a good deal if there are a good many of these amounts, and if they are nurtured and cared for as an endowment fund, but one single gift of $1,000 means so little to a hospital as a bed or ward endowment; the interest on $1,000 is only $50 a year, which will keep a patient about twenty-five days, and yet there are plenty of hospitals that are keeping patients in perpetuity for an original gift of that amount.

As a matter of fact, a donation to a hospital ought to be a definite philanthropy, or, if you please, charity. The recompense ought to be some cheerful recognition of the gift, such, for instance, as a bronze name plate in the assembly hall, but it ought not to carry with it any privilege other than that.

There is a really valuable advertising end to this principle of institution tablets; the man or woman entering the hospital who sees all about him decorative tablets and dainty forms of recognition of donations is very apt to want to join the galaxy and to have his name on a bronze plate too.

DUMBWAITERS AND ELEVATORS FOR HOSPITALS

Some of the Essentials and Specifications in a Usable Equipment—Much Depends on the Reputation of the Builder

BY J. I. WAIKLEE

The elevator and dumbwaiter equipment in many hospitals is unsatisfactory and far behind the standard of other equipment. If the institution has ample funds for all requirements, if a suitable type of electric current is available, and if the institution has in its employ an expert electrical and mechanical engineer, or is situated within easy access of a reliable elevator manufacturer, so that repairs and adjustments can be promptly and satisfactorily made, then the problem is simple—install an electric elevator and an electric dumbwaiter.

It is where one or more of these essentials are lacking that the trouble occurs. The alternatives are hand-operated dumbwaiters and elevators, and these are frequently supposed to be such simple and crude affairs that no special attention is given to them. The fact is that the average hand-power dumbwaiters and elevators are crude affairs, most of those made today being no improvement over those made years ago. There are, however, exceptions to this rule, and there are both hand-power elevators and dumbwaiters for hospital service which are made by specialists, and which are so designed and built that they do give satisfaction.

The important thing is to secure hand-power elevator and dumbwaiter equipment from a concern which specializes in such outfits for hospital service rather than from some local source which has neither the equipment nor the experience which would enable it to produce a satisfactory outfit, nor, on the other hand, from a large concern which considers hand-power elevators an unimportant side line, of too little importance in comparison with its main line to be worthy of special attention.

As to the dumbwaiter, the first matter to decide is the weight of the usual load. If food for one or a few patients at a time is to be carried on the dumbwaiter, then a light, rapid-running outfit should be selected. The limit for this class of service is twenty-five pounds. If, on the other hand, food for an entire ward is to be carried on the dumbwaiter, loads in excess of twenty-five pounds, then a geared outfit of substantial construction should be installed. Satisfactory results merely depend, therefore, on ascertaining just what the work is to be and the selection of a suitable outfit, or perhaps it may not be amiss to say the selection of that make of dumbwaiter the manufacturers of which may be depended on both to know what should be installed, and to furnish just that and nothing else.

The outfit selected should have an automatic brake to prevent the loaded car "running away" through the carelessness of the operator. The machine should be fitted with steel antifriction roller bearings, and the essential parts of the automatic brake should be of phosphor bronze to insure durability and satisfactory service. The machine must have no pawls, springs, or ratchets to cause noise and get out of order. The car should be built of selected, thoroughly air-seasoned ash, kiln dried before being worked. The sides of the car should be blind-bolted to the sills, and all wood screws the heads of which are exposed should be slightly oval, not buttonhead, to prevent bruising or cutting the hands. This material and construction, with proper design and workmanship, gives a maximum of strength and durability, with a minimum of weight.

The hand or operating rope should be of fine-fibered Russian hemp, containing no coarse fiber or foreign substance to "splinter" and tear the hands of the operator. The lift or carrying rope for car and counterweight should be of pure, selected long-fiber manila hemp for durability, or, in case of geared dumbwaiter, the hemp rope should have in each of its strands a heart or core of wire cable, as this removes the possibility of the rope breaking and dropping the car. The guide runs should be of selected straight-grained North Carolina pine, free from knots, thoroughly seasoned and worked out in a molding machine, as only thus can smooth, quiet motion of the car and weight be secured.

The installation of the outfit is as important as the quality of the outfit selected. A good outfit improperly installed cannot give good results, but the directions and blueprints for erecting furnished by the manufacturers of the best outfits insure satisfaction if the mechanic who erects the outfit is a good workman and will follow these directions.

As to hand-power elevators for hospital service, let it be understood that no hand-operated elevator is suitable for general passenger service; that is, no hand-operated elevator is satisfactory for carrying people enjoying normal health. A hand-power elevator for carrying invalids in the home and sanatoriums and patients in hospitals is eminently practical if of proper design and manufacture. Here, again, the character and reputation of the manufacturer must be largely depended on. Do not make the mistake of supposing that, because a large concern making a first-class article of some other sort has a first-class reputation for his specialty, such concern must necessarily make a first-class hand-power elevator for hospital service. Here, too, often is where architects and hospital authorities make the vital mistake.

Many large manufacturers of electric or hydraulic elevators will frankly admit that they do not make a satisfactory hand-power hospital elevator, and, while they may either tell you that no hand-power elevator is satisfactory for hospital service, or claim that their own is as good as any, check up their statements by consultation with some reputable manufacturer who specializes in hand-power elevators and dumbwaiters exclusively, and draw your own conclusions as to what will best meet your needs and the exigencies of your own situation.

BATTLE CREEK HAS SEMI-CENTENNIAL

Notable Institution to Celebrate Half Century With Carnival, Clinics, and Banquet

In honor of the fiftieth anniversary of its founding, the Battle Creek Sanitarium will have a notable celebration on October 3, 4, and 5. The program is rich in varied features, among which are a great banquet, receptions, athletic contests, industrial pageant, outdoor spectacle, reunion of former patients, and a series of conferences on sociological, eugenic, sanitary, and medical subjects, in which prominent speakers from all parts of the country will take part. A considerable attendance of physicians is expected.

The beginnings of the sanitarium were sufficiently humble. A two-story frame house on a knoll in the outskirts of an obscure village, two physicians, and one patient comprised the tangible portion of what was called the Western Health Reform Institute. But the true riches of the establishment lay in the ideas on which it was based. These included not only the "water cure," but

diet reform, dress reform, and other "simple life" measures for the physical welfare of man. These fifty years have seen as big a change in the methods of the sanitarium as they have in its equipment of lands and buildings, yet those pioneers held the grain of the truth. In one sense the present great enterprise, with its imposing display of architecture, its marvelous apparatus for accurate diagnosis and the healing of the sick, its corps of skilled physicians, trained nurses, and hundreds of other employees, its fame, which has spread to the four corners of the world, is merely the outgrowth of that modest "house by the side of the road."

After a decade of moderate success, the institution came under its present management. New policies, new methods, and new principles were introduced. The old-time "water cure," which was a rule-of-thumb affair, was replaced by rational hydrotherapy. The newest developments of medical science, both as to methods and mechanism, were gradually added in the effort to create an institution that should show in practical operation all the resources of physiologic medicine. At the same time stress was laid on supplying all the comforts of a home and a hotel in addition to facilities for the administration of baths of every description, electricity in its different forms, medical gymnastics, and other rational agencies, with careful regulation of diet.

Steady growth led to successive enlargement of the accommodations. In 1902 a fire destroyed the main building and hospital. In planning the present magnificent structure, advantage was taken not only of the experience gained in the conduct of this institution, but of similar enterprises and hospitals in this country and in Europe. The main structure is 550 feet long, 50 feet wide, and six stories high. There are three extensions in the rear. To make the place entirely fireproof, wood was eliminated everywhere except in the doors and window cases. A ventilating system supplies 150,000 cubic feet of fresh air per minute. The cost of the building and its equipment has been nearly $2,000,000.

An annex purchased five years ago has rooms for from 250 to 300 persons, and in addition there are several large dormitories and numerous cottages for patients and employees. At present there are about 1,000 guests, including those not receiving regular medical attention, while a force of about 1,700 persons is employed to care for them. This fact gives a striking proof of the elaborateness and complexity of the care bestowed on the sick in a modern sanitarium. Last year a new surgical hospital was opened, embodying the latest and most scientific ideas in construction and equipment.

Being purely a charitable institution, and having no dividends to pay, the sanitarium is able to make liberal expenditures for the indigent sick. In one recent year these amounted to over $150,000, and the total sum for the half century has been over $1,400,000. The total number of patients to date is over 104,000, not counting guests not under a physician's care.

A hospital train of ten Pullman cars, designed by the army medical department, has been ordered from the Pullman shops at Chicago. Five of the cars are to be equipped with regular hospital beds, and have large side doors for loading and unloading stretchers; two will be of the regulation sleeper type, equipped with extra fans, medicine cabinets, and ice tanks; one will carry a complete operating room, and another a kitchen large enough to care for over 200 sick. In addition to the regular army personnel, the train will carry a special corps of army nurses to serve in the wards and operating car. The train will be painted maroon, with the insignia of the army medical department.

INSANE HAVE UNIQUE PERIODICAL

New Jersey State Hospital Publishes Journal for Which Patients Are Contributors—Some of the Contributions

The New Jersey State Hospital at Morris Plains, housing and caring for 2,700 patients, has begun the publication of quite a pretentious appearing monthly magazine styled "The Psychogram." The first number contains twenty pages and cover, the page size is 10 by 12¼ inches, and is well printed from large, clear type that makes easy reading.

The chief purpose of the publication, according to an editorial announcement, is "to arouse a spirit of congeniality among those who are residents at the institution; to encourage intellectual and moral improvement in the personalities of all who have occasion to read it; to bring cheer and gladness to patients who are separated from friends and relatives; and for the purpose of giving reliable information to the friends and relatives of patients and such members of the general public as may be interested in the conduct and welfare of this large public charity, maintained at Morris Plains for the treatment and care of persons suffering from the various forms of mental derangement."

Dr. Britton D. Evans, medical director of the hospital, is editor-in-chief, and the members of the medical staff are associate editors. Original contributions are invited from patients, and a large part of the matter published in the initial number consists of such contributions, including "Flossy's First Romance," "The Prince of the Golden Sea," and "The Making of a Man," all short stories: "A History of the Hospital;" "The Hospital From the Patient's Viewpoint;" "Woman," a poem; also poems entitled "On the Occasion of ———'s Birthday;" "The Goldenrod," "Life," "To An Old Lady," "Eternal Wisdom," "Don't Worry," "Let There Be Peace," "Inspiration," and "A Song of Peace and Praise." One of the most interesting bits of verse is "An Ode to the Sea," written by the first woman patient of the institution, who entered in 1876. The first stanza runs:

> "Oh, dread, mysterious Sea!
> Fair Undine rises from thy sparkling wave,
> Where many a soldier brave has found a grave,
> And where Ulysses erstwhile by sirens was beguiled.
> And Aphrodite from the waters smiled."

Another:

> "Oh, melancholy Sea! What longings stir in me
> To seek forever on thy bosom wide
> The boon of rest and peace on earth denied,
> And where the stars shall shine
> Forever on the quiet grave of mine."

For a "filler" one patient wrote:

> "Our typo whispers in our ear
> That eight more lines are needed here.
> And with nerve symbolic of his race
> Directs us here to fill this space.
> Thus restricted, what one lone pen
> Can impart is beyond our ken;
> We know a grist of spicy stuff,
> But, you'll observe, we have enough."

The recreation activities of the institution have not been overlooked. There is half a column of "Golf Notes" and a whole page of "Baseball News."

Employees of the Massillon State Hospital, Massillon, O., have formed a union with the view of securing a shorter working day. The organization, which is the first of its kind in the state, is of a permanent character, and is to be affiliated with the American Federation of Labor. Members say that they are now required to work as many as twelve and fourteen hours a day.